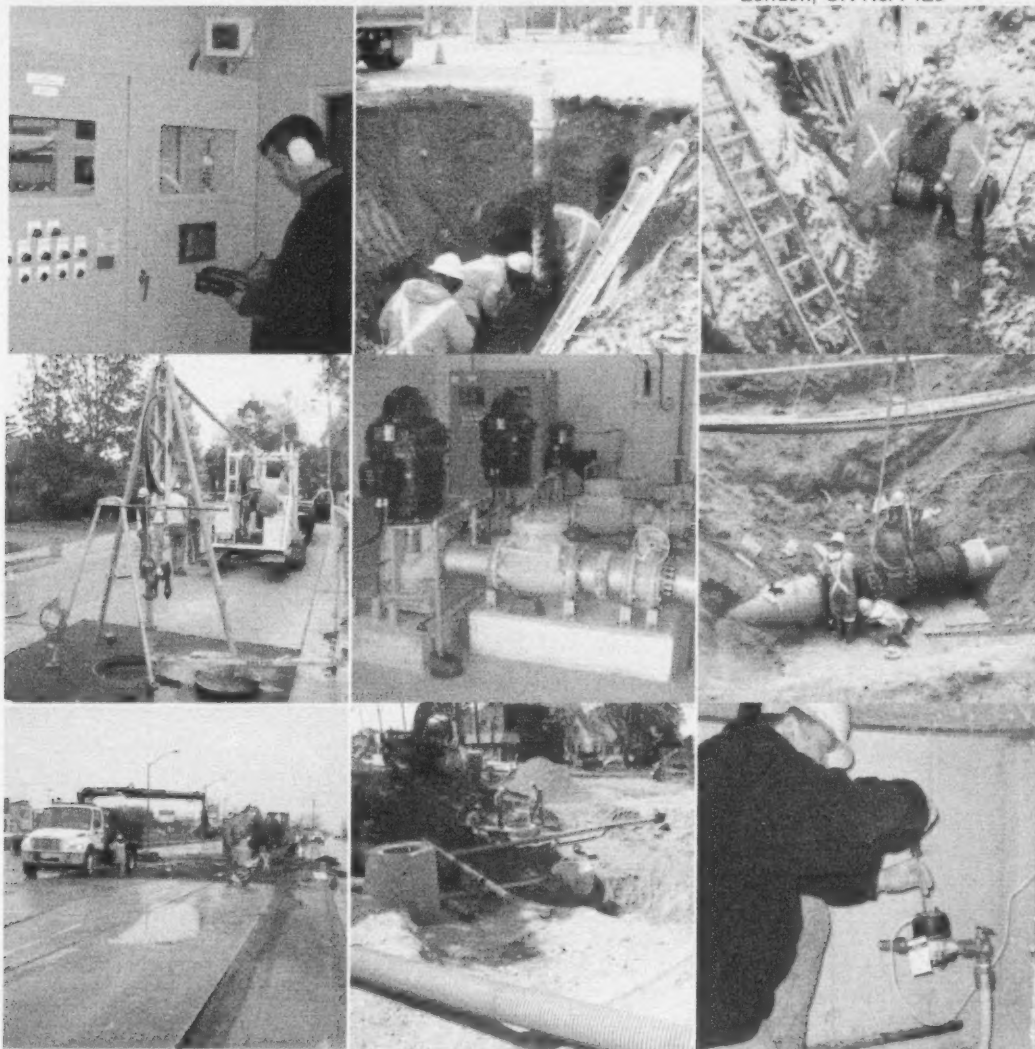


# CITY OF LONDON 2013 DRINKING WATER SUMMARY REPORT

*System Name:* City of London Distribution System

*Mailing Address:* Corporation of the City of London  
P.O. Box 5035, 300 Dufferin Ave.  
London, ON N6A 4L9



*System Rating:* Water Distribution Subsystem Class IV  
Water Treatment Subsystem Class II

Average Day Demand: 125.7 MLD

Peak Day Demand: 165.5 MLD (July 18, 2013)

Population Served: 366,000 (est.)

Source Water: Surface Water (Lake Huron, Lake Erie)

Drinking Water System Number: 260004917

Municipal Drinking Water Licence: 006-101

## **CONTACT INFO:**

Owner:

Corporation of the City of London

300 Dufferin Avenue, London, Ontario N6A 4L9

Contact: Mr. John Simon, P.Eng. Division Manager Water

Operations

519-661-2500 ext. 4938



**London**  
CANADA

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**Appendix 'A' – 2013 Annual Report**

**Appendix 'B' – 2013 Annual Report (Elgin Middlesex Pumping  
Station – London Distribution System)**

**Appendix 'C' – 2013 Summary of Water Pumpage**

## **Reporting Requirements**

Schedule 22-2 of O. Reg. 170/03 requires that the City of London prepare a Summary Report for its water works system for the preceding calendar year and submit it to the members of the Municipal Council by March 31 of each year. This report, presented to Municipal Council's Civic Works Committee on March 3, 2013 serves to fulfill that requirement.

On February 14, 2014, a copy of the 2013 Annual Report for the City of London's water works was submitted to the local office of the Ministry of Environment (MOE) as a courtesy for information purposes. A copy of this Summary Report for the City of London Distribution System will also be submitted, as a courtesy, to the local office of the MOE by March 31, 2013.

The Elgin-Middlesex Pumping Station (EMPS) (owned in part by the City of St. Thomas, the Town of Aylmer, and the City of London) was operated by the Ontario Clean Water Agency between January 1, 2013 and December 31, 2013. The Annual Report for the EMPS (London portion) is attached to this Summary Report as Appendix B.

## **Ministry of Environment Annual Inspection**

MOE inspections can be in the form of comprehensive inspections, or focused inspections. The MOE reported that London's Water Distribution System was chosen for a focused inspection because:

*"...inspection findings over the past three years were such that the number of violations were minimal or non-existent, there were few or no orders issued to you that were of significance in the maintenance of water potability and there were no deficiencies as defined in O. Reg. 172/03."*

The MOE inspection included staff interviews and facility inspections, as well as a review of operating procedures, water analysis reports, operational records, and staff certification and training records. The inspection covered all components of London's water system, including the London portion of the Elgin-Middlesex Pumping Station, which is operated by the Ontario Clean Water Agency under contract to the City of London.

On November 27, 2013, the MOE issued the City of London Water Distribution System Inspection Report. The report summarizes all of the inspection findings, and lists any incidents of non-compliance with regulatory requirements.

Only one incident of non-compliance was identified, which the MOE reported as follows:

*"During the physical inspection, it was noted that pencil was used to record information in the logbook at the Springbank Reservoirs."*

The MOE requires that logbook entries be made using ink.

This incident occurred on September 11, 2013. An electrical storm had caused power

outages throughout London, and many electronic components of the water infrastructure were adversely impacted. City staff attended several locations that evening to resolve the problems. At the Springbank Reservoirs, staff worked from 9:30 pm to 11:30 pm to resolve issues related to damaged circuitry of a large electronic flow-meter. Before leaving the site, the Technologist realized that he had left his pen at the previous work location that evening. Rather than make no logbook entry, he proceeded to record a summary of his work activities in pencil.

This incident of non-compliance does not reflect a drinking water quality hazard, but is indicative of the highly regulated nature of municipal drinking water systems in Ontario. It also serves to illustrate the level of diligence and scrutiny employed by MOE Inspectors when reviewing water system operations.

The results of the annual MOE Inspections are used to generate *Ministry of the Environment Drinking Water System Inspection Rating Records*. Each year these rating records (or "report cards") for Ontario drinking water systems are compiled and made available to the public. The rating records were developed to encourage continuous improvement by drinking water system operators.

Despite the one incident of non-compliance, The City of London received a Final Inspection Rating of 100% for 2013.

A report on this MOE Inspection was made to the Civic Works Committee on December 9, 2013. For more information about this inspection or to review the report, it can be found at <http://sire.london.ca/mtgviewer.aspx?meetid=602&doctype=AGENDA>.

## **Water Operations Staff Complement and Training**

In 2013, the distribution system was operated and maintained by four (4) Water Supply staff, thirty-one (31) Operations and Maintenance staff, three (3) Water Works inspectors, nine (9) Meter Shop staff, five (5) Supervisors, two (2) Technologists, two (2) Administrative staff, and four (4) Management staff. This complement does not include senior administrative staff that work in the Water Service Area. The majority of the City of London's operational and maintenance staff are based at the A.J. Tyler Operations Centre, located at 663 Bathurst Street. Water Supply staff are based out of the London Hydro building at 111 Horton Street.

All employees with Drinking Water Operator Certificates receive a minimum of 14 hours of Director-approved training and an additional 36 hours of practical, on-the-job training each year, as mandated by Regulation.

## **Water Budget**

After 2 consecutive years of 0% increases, the 2013 Water Operating Budget had an effective overall increase of 8%. This represents an increase of \$2.9 million over that of the 2012 budget. The total Water budget for 2013 was \$62.6 million, which includes long term infrastructure renewal and replacement plans. Administration believed that the



operating budget had been reduced to a point where continued operating targets of 0% would begin to impact service levels.

For The 2014 Water Rates increased by 8%, and are projected to increase by 7% in 2015. These increases will enable the Water Service Area to reach financial sustainability in 2016, 2 years earlier than previously anticipated.

The Water Budget helps maintain *London's Advantage* of a safe, clean and secure water supply. The Water Service Area remains proactive in initiatives to ensure that this service continues to meet the demands and expectations of customers. Existing infrastructure requires significant renewal (replacement and rehabilitation) work to close the infrastructure gap ensuring future generations and businesses are not faced with a water system that is failing, unreliable, and expensive to maintain.

For more information regarding the 2013 Water Budget, please refer to the [2013 Water Service Area Business Plan](#). In addition, further information on the future direction of the Water Service Area is provided in the [2014 Business Plan](#) and [2014 Budget Document](#).

## **Ongoing Initiatives & Undertakings**

***Drinking Water Quality Management System (DWQMS) Audit*** – Quality Management Systems (QMSs) can be defined as sets of interrelated elements (e.g. policies and procedures) that direct and control the way a facility operates with regard to quality. A QMS is a way of formally ensuring that an organization is consistently in control of the quality of the product or services that it supplies.

Following the Walkerton tragedy of May 2000, Justice Dennis O'Connor recommended that *"the MOE should initiate the development of a drinking water quality management standard for Ontario."* The Ministry of the Environment (MOE) led the development of a Drinking Water Quality Management Standard (DWQMS) which combined elements of existing ISO 9001 and HACCP standards. Through a new Municipal Drinking Water Licensing Program, the MOE mandated that municipal drinking water systems develop and implement Quality Management Systems that met the requirements of Ontario's DWQMS. Through external audits to ensure compliance, London's Water Operations and Water Engineering Divisions would then become the "accredited operating authority" for the London's water system.

In addition, Section 19 of the *Safe Drinking Water Act, 2012* imposes a statutory standard of care on the "owner of a municipal drinking water system, and every person who, on behalf of the municipality, oversees the accredited operating authority of the system or exercises decision making authority over the system". In recommending the Standard of Care provision, Justice O'Connor stated that *"the fact that a municipality has an accredited operating agency will do much to satisfy the standard of care."*

In June, 2013, the first On-Site Verification Audit was completed for the Quality Management System of London's drinking water system. The auditor reported that London's QMS *"has been established and maintained according to the DWQMS standard and internal requirements as documented in the Operational Plan"* and that *"The result of the audit indicates that the Corporation of the City of London QMS was*

*effectively implemented.*" In addition, five nonconformities were identified, which were subsequently addressed to the satisfaction of the auditor. This process identified the need to commit additional resources toward the maintenance of London's Drinking Water Quality Management System. This recommendation was included in, and subsequently approved by the Municipal Council as part of the 2014 Water Budget.

As a result of the audit, the City of London has been fully accredited as the operating authority for London's drinking water system under Ontario's Municipal Drinking Water Licensing Program.

**Lead Mitigation Strategy** – In 2006, the City of London implemented a program that allows Londoners to have lead concentrations in their tap water analyzed at no charge. Since that time, nearly 13,000 homes and businesses have had their water sampled for lead. There are approximately 112,000 water service pipes in London. Prior to 1953, lead was a commonly used material for water service pipes, and in 2007 it was estimated that 9,000 London water services were fully, or partially, composed of lead. The City of London's lead service replacement programs have reduced this number to just under 5,200 at the end of 2013.

The City of London developed a three-pronged strategy for lead mitigation:

1. **Education and Awareness:** In addition to free lead testing, the City of London continues to provide information to Londoners regarding lead service pipes and the risks associated with lead.
2. **Water Chemistry Changes:** In conjunction with the Lake Huron and Elgin Area Primary Water Supply Systems, the City of London has investigated and initiated water chemistry changes that have reduced the uptake of lead. Increasing the pH of the water has reduced "at the tap" lead concentrations by nearly 50% from 2007 levels.
3. **Replacement of Lead Service Pipes:** London's overall goal is the replacement of all lead services. This is an 18-year program the will see the majority of lead services replaced through the Capital Watermain Replacement Program. The remainder will occur through the Watermain Relining Programs and one-off replacements through the City's Lead Service Extension Replacement Program.



**Water Reliability: Large Diameter Concrete Pressure Pipe Watermain Inspection Program** - Concrete Pressure Pipe (CPP) is a composite pipe manufactured using a thin steel cylinder wrapped in high tension wires, and coated internally and externally with cement mortar.

Over time the protective mortar can break down, exposing the steel cylinder and the prestressed wires to corrosion. As the pre-stressed wires corrode, some may break. If enough wires break, the pipe section may fail.

Significant failures of the Lake Huron Pipeline occurred In August 1983, June 1988, March 2010, and May 2012 which threatened London's water supply. Fortunately the failures occurred outside of densely populated areas and were repaired by City crews in a timely fashion. There have never been any major failures of large concrete or concrete pressure pipes within the City of London; however, the age and construction practices for these watermains are similar to the Lake Huron Pipeline.

Within London, there are 160 km of large diameter concrete transmission mains moving millions of litres of water around the City. Some of these mains were constructed in the 1950's and 1960's and detailed inspection records outlining installation techniques and pipe integrity do not exist. The 19 km concrete watermain that connects the Arva Pumping Station with the Springbank Reservoirs is one of the most critical links in London's water system, and serves the majority of homes and businesses in London. In the summer and fall of 2007, three different inspections were undertaken on this pipe, as detailed below:

1. Leak Detection - provided a current condition of the pipe by determining if there are any leaks in the system.
2. Electromagnetic Inspection - provided a scientific analysis of the internal condition of the pre-stressed wires.
3. Visual Internal Inspection - determined if there is any breakdown in the internal concrete layer.

In addition, through a multi-year project, a fibre optic cable was installed inside nearly all of the 19 km from the Arva Pumping Station to the Springbank Reservoirs, providing the capability to continuously monitor the pre-stressed steel wires. The fibre optic cable registers an acoustic signature when a wire breaks, and immediate notification is sent to City staff. This real-time information received from the fibre will give staff the ability to react immediately, and prevent a potentially catastrophic pipe failure.

***Water Efficiency: Computerized Maintenance Management System (CMMS)*** - The City's critical infrastructure continues to grow in magnitude and complexity. High expectations are placed on the gatekeepers of these complex systems. Accurate data management relating to assigned and completed work, full cost accounting, tangible capital asset reporting, strategic asset management planning and budget challenges are just a few elements that have added to the complexity of ownership and maintenance management. It is become evident that current practices are unsustainable and that the demands associated with infrastructure ownership must be managed through a formal work order system that enables staff to develop sound, strategic work plans, and to implement, record and store data effectively, efficiently and economically.

CMMS will help manage the ever-increasing complexities associated with being the custodian of the City's water infrastructure assets. In order to comply with stringent legislative requirements and to meet or exceed current service levels provided to the City's constituents, the CMMS will allow the Operating divisions to plan and schedule work, visualize locations of crews in real-time using Automated Vehicle Location (AVL)



technology, conduct analysis on asset performance and provide information on asset condition for financial and operations reporting.

Currently, the City is working with ESRI Canada to develop a full Scope of Work for the implementation of a GIS-centric CMMS. Once completed and approved, the proposed CMMS system will become the nucleus of the City's day-to-day water operations, enabling staff to deliver a strategic, timely, effective, efficient and economical service to its valued customers. Further, a computerized maintenance management system will have the capability of providing critical information to support the Corporate Asset Management program. Effectively managing the City's ever growing, complex infrastructure and meeting the associated legislative requirements and becoming eligible for future infrastructure funding programs are the primary drivers behind this project. The purchase of a CMMS will bring the City of London up to par with most of London's comparable municipalities in the application of this technology.

Benefits of a CMMS include:

- Improved citizen response:
  - All complaints and requests for service are recorded in real time.
  - Staff members receiving calls have access to complete information.
  - Work requirements for customer complaints/requests are tracked.
- Improve efficiency in the use of available resources:
  - CMMS provides a means of developing more strategic plans with consideration for time, labour, equipment and material requirements.
  - Outstanding work can be prioritized.
  - Original work schedules can be amended easily to accommodate unplanned events.
  - Duplication of work can be avoided.
- Improved focus for maintenance activities:
  - The ability to track maintenance requests, production, history, and specific information.
  - The ability to track problems through regular inspections, resulting in an efficient ratio of proactive to reactive work and determining the appropriate balance of risk.
  - Correlating completed work with asset type, specific structures, and geographical areas leads to optimization of maintenance programs for minor, major and rehabilitation projects.
- Improved response to government / legal and MFIPPA requests:
  - A CMMS can generate accurate information required to satisfy government/ legal information requests and MFIPPA requests.
- Improve information sharing with other departments and/or divisions:
  - Provide legislated Tangible Capital Asset (TCA) information regarding asset condition, increase life (betterment) or decreased life (write-down).
  - Feeding accurate information up to the Corporate level to support an overall Asset Management Plan and a State of the Infrastructure Report.

## **Emerging Trends in Water Treatment & Regulations**

**Water Treatment:** The City of London purchases its treated drinking water from the Joint Boards of Management (Lake Huron and Elgin Area Primary Water Supply Systems). The Joint Boards of Management, through the Regional Water Supply



Division, stay abreast of emerging trends in water treatment and monitor upcoming Regulations. Current areas of interest include Microbiological (E. coli and Total Coliform), Disinfection By-Products (Trihalomethane (THM), Haloacetic Acids (HAA)), Lead and Copper, and Emerging Pathogens and Chemicals).

Currently, there are no water quality concerns requiring process modification at the Regional Water Supply treatment facilities. The area of emerging contaminants including pharmaceuticals and personal care products (PPCP's) and endocrine disruptors (EDC's) will be the focus of much research in the coming decades. At this time, there is no evidence to suggest that the Joint Board of Management should conduct further investigations into the implementation of advanced or enhanced treatment processes at either the Lake Huron or Elgin Area Treatment Plants.

For further information on emerging trends in water treatment and Regulations, please refer to the Lake Huron and Elgin Area Water Supply Systems Master Plans, which can be found at <http://www.watersupply.london.ca/reports.html>.

**Standard of Care Provision in Ontario's Safe Drinking Water Act, 2002:** On December 31, 2012, Section 19 of the *Safe Drinking Water Act, 2002* came into force. It imposed a statutory standard of care on the "owner of a municipal drinking water system, and every person who, on behalf of the municipality, oversees the accredited operating authority of the system or exercises decision-making authority over the system". This standard of care requires that such persons (a) exercise the level of care, diligence and skill in respect of a municipal drinking water system that a reasonably prudent person would be expected to exercise in a similar situation; and (b) act honestly, competently and with integrity, with a view to ensuring the protection and safety of the users of the municipal drinking water system.

Actions that can be taken to satisfy the standard of care requirement include: obtaining and following proper expert advice, and ensuring that the water system is operated by an accredited operating authority. As has been previously reported to Council, the City of London Water Operations and Water Engineering Divisions have been recognized as an accredited operating authority for the City of London Water System.

For more information regarding the Standard of Care provision, a full report was presented to Civic Works Committee on October 22, 2012.

**Safeguarding and Sustaining Ontario's Water Act:** We continue to work with the Ontario Ministries of Environment and Natural Resources in the development of Regulations under the Safeguarding and Sustaining Ontario's Water Act, which addresses the obligations of the Great Lakes & St. Lawrence River Basin Water Resources Agreement with eight US States and the Provinces of Ontario and Quebec. In particular, Regulations with respect to intra-basin transfers have the potential to significantly and negatively impact a large area of southwestern Ontario by potentially limiting the amount of water which can be supplied to London from the Lake Huron system at present and in the future, likely resulting in the expenditure of hundreds of millions of dollars to replace capacity that is currently available. Meetings with the Ministries appear to have been fruitful in that current policy discussions and drafting of Regulations may allow London and area municipalities the ability to continue to utilize existing infrastructure to its full permitted capacity.

**Algal Blooms in the Great Lakes:** Algal blooms usually occur in the late summer and early fall. A bloom is a large mass of algae that is formed as a result of a number of ecosystem changes. These changes are brought about by an elevated presence of

nutrients, invasive species such as quagga mussels, or light and temperature conditions that are favourable for the algae to multiply quickly.

There is more than one variety of algae. When alive they provide food for a variety of fish. When algae blooms die, some of the varieties release odorous chemicals into the water that can affect the taste and/or smell of our drinking water. Others, such as some types of blue-green algae (cyanobacteria), release toxins that can cause health issues for humans and animals. As such, algae blooms have the potential to negatively impact drinking water quality, recreational activities, tourism, commercial fisheries and lakeshore property values.

The Ministry of Environment has a protocol in place for responding to occurrences of blue-green algal blooms in Ontario lakes. MOE staff work closely with the local Medical Officers of Health to ensure that timely, appropriate action is taken. Local Medical Officers of Health address public health concerns with respect to blue-green algal blooms, and communicate with consumers and drinking water system owners within their area.

A survey conducted by ministry staff for cyanobacterial toxins at 18 drinking water facilities from 2004 to 2010, suggests that water treatment plants have been effective at removing or inactivating these toxins in drinking water.

The recurrence of algal blooms in certain areas of the Great Lakes, such as Lake Erie, has prompted discussions with the International Joint Commission, federal, state and other Provincial governments as well as non-government bodies to improve the ecological conditions of our Great Lakes.

**OnWARN: Ontario Water/Wastewater Agency Response Network:** This initiative, based upon the principle of "*Utilities helping Utilities*", has gained momentum throughout the water utility sector in Ontario, Canada and the United States, as a means of providing voluntary mutual-aid to similar utilities within a region. The OnWARN program establishes a legal framework whereby any subscribing utility can call upon the assistance of other subscribing utilities, with the response being provided within the context of a blanket "mutual aid" type of agreement. The blanket agreement covers all aspects of legal liability, availability of response and the provision of services, and health and safety requirements, to name a few.

Participation in the OnWARN program does not specifically require a subscribing municipality to respond to any and all calls for assistance, nor does it obligate a subscribing municipality to call upon all subscribers for assistance in the event of an emergency. It also does not require a municipality to formally declare a state of emergency, only that the water or wastewater related circumstance is beyond the capabilities of the municipality.

Recognizing the significant benefit of joining OnWARN and improving emergency preparedness for the City's water and wastewater services, the City of London received its membership certificate on September 11, 2013. More information can be found from the February 25, 2013 Civic Works Committee Report ([Item #14](#)).

## **Sampling & Water Quality Monitoring**

During 2013, staff conducted water sampling from the distribution system which exceeded the MOE's minimum requirements. Staff take monthly samples from 57

standard locations across the City, testing for microbiological indicators and chlorine residuals. In addition, analysis is performed for up to 121 parameters, including organics, inorganics, pesticides and metals at 13 standard locations around the City. 8,205 routine grab samples were taken from the distribution system, 795 samples taken from the stand-by wells, as well as over 2,750 chlorine residual tests conducted by London staff. London also has 10 locations throughout the City where continuous in-line sampling of chlorine residual is monitored. Staff also perform approximately 4,000 chlorine tests (on the Distribution System and for Construction Projects and Bacteriological sampling upon repairs undertaken) each year that are not included in the above numbers. All of these efforts help ensure that the water within the distribution system is always of high quality.

Below is the historical range (since 2000) of sample results for London's drinking water.

| Parameter              | ODWS <sup>1</sup><br>Maximum<br>Acceptable<br>Concentration<br>(MAC) | Lab's Method<br>Detection<br>Limit (MDL) | Units | Measured<br>Concentrations | MAC<br>Exceedence<br>in 2013<br>(Y/N) | Historical<br>Measured<br>Concentration<br>Range <sup>2</sup> |
|------------------------|--|--|-------|----------------------------|---------------------------------------|---|
|                        |  | 2013                                     |       | 2013                       |                                       |   |
| REGULATED INORGANICS   |  |  |       |                            |                                       |   |
| Antimony               | 6  | 0.02                                     | µg/L  | 0.100 - 0.200              | No                                    | 0.020 - 1.200   |
| Arsenic                | 25   | 0.2                                      | µg/L  | 0.500 - 0.700              | No                                    | 0.001 - 2.000   |
| Barium                 | 1000   | 0.05                                     | µg/L  | 14.000 - 25.000            | No                                    | 0.015 - 25.000  |
| Boron                  | 5000   | 1  | µg/L  | 13.000 - 20.000            | No                                    | 0.020 - 40.000  |
| Cadmium                | 5  | 0.003                                    | µg/L  | 0.020 - 0.020              | No                                    | 0.002 - 0.100   |
| Chromium               | 50   | 0.5                                      | µg/L  | 2.000 - 2.000              | No                                    | 0.004 - 3.000   |
| Fluoride               | 1.5  | 0.06                                     | mg/L  | 0.070 - 0.800              | No                                    | 0.030 - 1.390   |
| Free Chlorine Residual | --   | --                                       | mg/L  | 0.080 - 1.990              | No                                    | 0.000 - 2.200   |
| Lead                   | 10   | 0.02                                     | µg/L  | N/A - N/A                  | N/A                                   | 0.002 - 1.070   |
| Mercury                | 1  | 0.02                                     | µg/L  | 0.020 - 0.020              | No                                    | 0.000 - 0.100   |
| Selenium               | 10   | 1  | µg/L  | 1.000 - 1.000              | No                                    | 0.005 - 3.000   |
| Sodium <sup>3</sup>    | 20   | 0.01                                     | mg/L  | 10.700 - 20.300            | Yes                                   | 1.000 - 20.300  |
| Uranium                | 20   | 0.001                                    | µg/L  | 0.050 - 0.050              | No                                    | 0.001 - 9.700   |

| Parameter                            | ODWS <sup>1</sup><br>Maximum<br>Acceptable<br>Concentration<br>(MAC) | Lab's Method<br>Detection<br>Limit (MDL) | Units | Measured<br>Concentrations | MAC<br>Exceedence<br>in 2013<br>(Y/N) | Historical<br>Measured<br>Concentration<br>Range <sup>2</sup> |
|--------------------------------------|--|--|-------|----------------------------|---------------------------------------|---|
|                                      |  | 2013                                     |       | 2013                       |                                       |   |
| REGULATED ORGANICS                   |  |  |       |                            |                                       |   |
| Alachlor                             | 5  | 0.020                                    | µg/L  | 0.300 <MDL                 | No                                    | 0.002 - 0.300   |
| Aldicarb                             | 9  | 0.010                                    | µg/L  | 3.000 <MDL                 | No                                    | 0.005 - 5.000   |
| Aldrin + Dieldrin                    | 0.7  | 0.010                                    | µg/L  | 0.020 <MDL                 | No                                    | 0.000 - 0.067   |
| (Aldrin)                             | --   | 0.010                                    | µg/L  | N/A - N/A                  | N/A                                   | 0.010 - 0.060   |
| (Dieldrin)                           | --   | 0.010                                    | µg/L  | N/A - N/A                  | N/A                                   | 0.001 - 0.067   |
| Atrazine                             | --   | 0.020                                    | µg/L  | N/A - N/A                  | N/A                                   | 0.020 - 0.130   |
| Atrazine + N-dealkylated metabolites | 5  | 0.040                                    | µg/L  | 0.500 <MDL                 | No                                    | 0.003 - 0.500   |
| Azinphos-methyl                      | 20   | 0.020                                    | µg/L  | 1.000 <MDL                 | No                                    | 0.010 - 1.000   |
| Bendiocarb                           | 40   | 0.010                                    | µg/L  | 3.000 <MDL                 | No                                    | 0.010 - 3.000   |
| Benzene                              | 5  | 0.32                                     | µg/L  | 0.500 <MDL                 | No                                    | 0.005 - 0.500   |
| Benzo(a)pyrene                       | 0.01   | 0.004                                    | µg/L  | 0.005 <MDL                 | No                                    | 0.000 - 0.009   |
| Bromoxynil                           | 5  | 0.300                                    | µg/L  | 0.300 <MDL                 | No                                    | 0.003 - 0.330   |
| Carbaryl                             | 90   | 0.010                                    | µg/L  | 3.000 <MDL                 | No                                    | 0.010 - 3.000   |
| Carbofuran                           | 90   | 0.010                                    | µg/L  | 1.000 <MDL                 | No                                    | 0.005 - 5.000   |
| Carbon tetrachloride                 | 5  | 0.16                                     | µg/L  | 0.200 <MDL                 | No                                    | 0.005 - 0.410   |
| Chlordane (Total)                    | 7  | 0.010                                    | µg/L  | 0.040 <MDL                 | No                                    | 0.000 - 0.200   |
| (α-chlordane)                        | --   | 0.010                                    | µg/L  | N/A - N/A                  | N/A                                   | 0.007 - 0.200   |
| (γ-chlordane)                        | --   | 0.010                                    | µg/L  | N/A - N/A                  | N/A                                   | 0.007 - 0.200   |
| (oxychlordane)                       | --   | 0.010                                    | µg/L  | N/A - N/A                  | N/A                                   | 0.010 - 0.360   |
| Chlorpyrifos                         | 90   | 0.020                                    | µg/L  | 0.500 <MDL                 | No                                    | 0.008 - 5.000   |
| Cyanazine                            | 10   | 0.030                                    | µg/L  | 0.500 <MDL                 | No                                    | 0.008 - 0.500   |
| Diazinon                             | 20   | 0.020                                    | µg/L  | 1.000 <MDL                 | No                                    | 0.002 - 2.000   |
| Dicamba                              | 120  | 0.20                                     | µg/L  | 5.000 <MDL                 | No                                    | 0.050 - 10.000  |
| 1,2-Dichlorobenzene                  | 200  | 0.100                                    | µg/L  | 0.100 <MDL                 | No                                    | 0.003 - 1.000   |
| 1,4-Dichlorobenzene                  | 5  | 0.200                                    | µg/L  | 0.200 <MDL                 | No                                    | 0.001 - 0.400   |
| DDT + Metabolites                    | 30   | 0.010                                    | µg/L  | 0.010 <MDL                 | No                                    | 0.005 - 0.500   |
| (op-DDT)                             | --   | 0.010                                    | µg/L  | N/A - N/A                  | N/A                                   | 0.010 - 0.500   |
| (pp-DDD)                             | --   | 0.010                                    | µg/L  | N/A - N/A                  | N/A                                   | 0.010 - 0.500   |
| (pp-DDE)                             | --   | 0.010                                    | µg/L  | N/A - N/A                  | N/A                                   | 0.010 - 0.500   |
| (pp-DDT)                             | --   | 0.010                                    | µg/L  | N/A - N/A                  | N/A                                   | 0.010 - 0.500   |
| 1,2-Dichloroethane                   | 5  | 0.100                                    | µg/L  | 0.100 <MDL                 | No                                    | 0.005 - 0.430   |
| 1,1-Dichloroethylene                 | 14   | 0.100                                    | µg/L  | 0.100 <MDL                 | No                                    | 0.005 - 0.520   |
| Dichloromethane                      | 50   | 0.300                                    | µg/L  | 0.300 <MDL                 | No                                    | 0.005 - 3.000   |
| 2,4-dichlorophenol                   | 900  | 0.100                                    | µg/L  | 0.100 <MDL                 | No                                    | 0.000 - 0.150   |
| 2,4-D                                | 100  | 0.19                                     | µg/L  | 5.000 <MDL                 | No                                    | 0.044 - 5.000   |
| Diclofop-methyl                      | 9  | 0.40                                     | µg/L  | 0.500 <MDL                 | No                                    | 0.005 - 0.840   |
| Dimethoate                           | 20   | 0.030                                    | µg/L  | 1.000 <MDL                 | No                                    | 0.005 - 1.000   |
| Dinoseb                              | 10   | 0.36                                     | µg/L  | 0.500 <MDL                 | No                                    | 0.005 - 0.500   |
| Diquat                               | 70   | 1  | µg/L  | 5.000 <MDL                 | No                                    | 1.000 - 70.000  |
| Diuron                               | 150  | 0.030                                    | µg/L  | 5.000 <MDL                 | No                                    | 0.030 - 5.000   |
| Glyphosate                           | 280  | 6  | µg/L  | 25.000 <MDL                | No                                    | 0.010 - 25.000  |
| Heptachlor + Heptachlor Epoxide      | 3  | 0.010                                    | µg/L  | 0.100 <MDL                 | No                                    | 0.001 - 0.300   |
| (heptachlor)                         | --   | 0.010                                    | µg/L  | N/A - N/A                  | N/A                                   | 0.010 - 0.300   |
| (heptachlor epoxide)                 | --   | 0.010                                    | µg/L  | N/A - N/A                  | N/A                                   | 0.010 - 0.300   |
| Lindane (Total)                      | 4  | 0.010                                    | µg/L  | 0.100 <MDL                 | No                                    | 0.002 - 0.200   |
| Malathion                            | 190  | 0.020                                    | µg/L  | 5.000 <MDL                 | No                                    | 0.020 - 5.000   |
| Methoxychlor                         | 900  | 0.010                                    | µg/L  | 0.100 <MDL                 | No                                    | 0.010 - 5.000   |
| Metolachlor                          | 50   | 0.020                                    | µg/L  | 3.000 <MDL                 | No                                    | 0.008 - 5.000   |
| Metribuzin                           | 80   | 0.020                                    | µg/L  | 3.000 <MDL                 | No                                    | 0.020 - 5.000   |
| Monochlorobenzene                    | 80   | 0.200                                    | µg/L  | 0.200 <MDL                 | No                                    | 0.005 - 5.000   |
| Paraquat                             | 10   | 1  | µg/L  | 1.000 <MDL                 | No                                    | 0.010 - 9.000   |
| Parathion                            | 50   | 0.020                                    | µg/L  | 3.000 <MDL                 | No                                    | 0.020 - 3.000   |
| Pentachlorophenol                    | 60   | 0.100                                    | µg/L  | 0.100 <MDL                 | No                                    | 0.001 - 1.000   |



| Parameter | ODWS <sup>1</sup><br>Maximum<br>Acceptable<br>Concentration<br>(MAC) | Lab's Method<br>Detection<br>Limit (MDL)<br>2013 | Units | Measured<br>Concentrations | MAC<br>Exceedence<br>in 2013<br>(Y/N) | Historical<br>Measured<br>Concentration<br>Range <sup>2</sup> |
|-----------|--|--|-------|----------------------------|---------------------------------------|---|
|           |  |  |       | 2013                       |                                       |   |

#### REGULATED ORGANICS CONTINUED

|                                  |     |       |      |             |    |                |
|----------------------------------|-----|-------|------|-------------|----|----------------|
| Phorate                          | 2   | 0.010 | µg/L | 0.300 <MDL  | No | 0.001 - 0.730  |
| Picloram                         | 190 | 0.25  | µg/L | 5.000 <MDL  | No | 0.043 - 5.000  |
| Polychlorinated Biphenyls (PCBs) | 3   | 0.04  | µg/L | 0.050 <MDL  | No | 0.001 - 0.100  |
| Prometryne                       | 1   | 0.030 | µg/L | 0.100 <MDL  | No | 0.001 - 0.230  |
| Simazine                         | 10  | 0.010 | µg/L | 0.500 <MDL  | No | 0.005 - 0.500  |
| Temephos                         | 280 | 0.010 | µg/L | 10.000 <MDL | No | 0.010 - 15.000 |
| Terbufos                         | 1   | 0.010 | µg/L | 0.300 <MDL  | No | 0.001 - 0.730  |
| Tetrachloroethylene              | 30  | 0.200 | µg/L | 0.200 <MDL  | No | 0.005 - 1.000  |
| 2,3,4,6-tetrachlorophenol        | 100 | 0.100 | µg/L | 0.100 <MDL  | No | 0.001 - 0.500  |
| Triallate                        | 230 | 0.10  | µg/L | 10.000 <MDL | No | 0.010 - 10.000 |
| Trichloroethylene                | 50  | 0.100 | µg/L | 0.100 <MDL  | No | 0.005 - 1.000  |
| 2,4,6-trichlorophenol            | 5   | 0.100 | µg/L | 0.100 <MDL  | No | 0.001 - 0.890  |
| 2,4,5-T                          | 280 | 0.22  | µg/L | 10.000 <MDL | No | 0.005 - 10.000 |
| Trifluralin                      | 45  | 0.020 | µg/L | 0.500 <MDL  | No | 0.020 - 1.000  |
| Vinyl Chloride                   | 2   | 0.17  | µg/L | 0.200 <MDL  | No | 0.002 - 0.200  |

| Parameter | ODWS <sup>1</sup><br>Maximum<br>Acceptable<br>Concentration<br>(MAC) | Lab's Method<br>Detection<br>Limit (MDL)<br>2013 | Units | Measured<br>Concentrations | MAC<br>Exceedence<br>in 2013<br>(Y/N) | Historical<br>Measured<br>Concentration<br>Range <sup>2</sup> |
|-----------|--|--|-------|----------------------------|---------------------------------------|---|
|           |  |  |       | 2013                       |                                       |   |

#### NITRATES

|                                 |    |       |      |               |    |               |
|---------------------------------|----|-------|------|---------------|----|---------------|
| Nitrate (as nitrogen)           | 10 | 0.013 | mg/L | 0.190 - 0.800 | No | 0.005 - 1.700 |
| Nitrate + Nitrite (as nitrogen) | 10 | 0.013 | mg/L | 0.190 - 0.000 | No | 0.005 - 1.700 |
| Nitrite (as nitrogen)           | 1  | 0.005 | mg/L | 0.050 - 0.100 | No | 0.005 - 0.129 |

| Parameter | ODWS <sup>1</sup><br>Maximum<br>Acceptable<br>Concentration<br>(MAC) | Lab's Method<br>Detection<br>Limit (MDL)<br>2013 | Units | Measured<br>Concentrations | MAC<br>Exceedence<br>in 2013<br>(Y/N) | Historical<br>Measured<br>Concentration<br>Range <sup>2</sup> |
|-----------|--|--|-------|----------------------------|---------------------------------------|---|
|           |  |  |       | 2013                       |                                       |   |

#### TRICHALOMETHANES

|                         |     |       |      |                 |    |                |
|-------------------------|-----|-------|------|-----------------|----|----------------|
| Trihalomethanes (total) | 100 | 0.37  | µg/L | 13.400 - 37.100 | No | 0.010 - 57.000 |
| Bromoform               | --  | 0.100 | µg/L | 0.100 - 0.400   | No | 0.002 - 2.000  |
| Chloroform              | --  | 0.29  | µg/L | 8.100 - 23.200  | No | 0.002 - 39.000 |
| Dibromochloromethane    | --  | 0.37  | µg/L | 1.100 - 4.400   | No | 0.002 - 5.400  |
| Bromodichloromethane    | --  | 0.26  | µg/L | 4.200 - 10.100  | No | 0.002 - 12.000 |

| Parameter | ODWS <sup>1</sup><br>Maximum<br>Acceptable<br>Concentration<br>(MAC) | Lab's Method<br>Detection<br>Limit (MDL)<br>2013 | Units | Measured<br>Concentrations | MAC<br>Exceedence<br>in 2013<br>(Y/N) | Historical<br>Measured<br>Concentration<br>Range <sup>2</sup> |
|-----------|--|--|-------|----------------------------|---------------------------------------|---|
|           |  |  |       | 2013                       |                                       |   |

#### MICROBIOLOGICAL

|                           |    |    |           |           |     |           |
|---------------------------|----|----|-----------|-----------|-----|-----------|
| E. Coli                   | 0  | 0  | CFU/100mL | 0 - 0     | No  | 0 - 1     |
| Total Coliform            | 0  | 0  | CFU/100mL | 0 - 9     | Yes | 0 - 41    |
| Heterotrophic Plate Count | -- | 10 | cfu/1mL   | 10 - 2000 | No  | 10 - 2000 |

| Parameter                                      | ODWS <sup>1</sup><br>Maximum<br>Acceptable<br>Concentration<br>(MAC) | Lab's Method<br>Detection<br>Limit (MDL) | Units         | Measured<br>Concentrations | MAC<br>Exceedence<br>in 2013<br>(Y/N) | Historical<br>Measured<br>Concentration<br>Range <sup>2</sup> |
|--|--|--|---------------|----------------------------|---------------------------------------|---|
|  |  | 2013                                     |               | 2013                       |                                       |   |
| NON-REGULATED INORGANICS/ORGANICS <sup>4</sup> |  |  |               |                            |                                       |   |
| Alkalinity                                     | --   | 2  | mg/L as CaCO3 | 78.0 - 103.0               | No                                    | 61.0 - 103.0  |
| Aluminum                                       | --   | 0.040                                    | µg/L          | 0.040 - 0.070              | No                                    | 0.030 - 436.0   |
| Ammonia+Ammonium (N)                           | --   | 0.010                                    | mg/L          | 0.010 - 0.010              | No                                    | 0.010 - 0.400   |
| Calcium  | --   | 0.03                                     | mg/L          | 25.600 - 33.700            | No                                    | 25.600 - 38.000   |
| Chloride                                       | --   | 0.03                                     | mg/L          | 8.300 - 16.800             | No                                    | 7.200 - 36.100  |
| Cobalt   | --   | 0.002                                    | µg/L          | 0.005 - 0.005              | No                                    | 0.004 - 0.300   |
| Colour   | --   | 3  | TCU           | N/A - N/A                  | N/A                                   | 3.000 - 13.000  |
| Conductivity                                   | --   | 1  | uS/cm         | 251.0 - 341.0              | No                                    | 205.0 - 341.0   |
| Copper   | --   | 0.5                                      | µg/L          | N/A - N/A                  | N/A                                   | 0.002 - 64.000  |
| Cyanide  | 0.2  | 0.002                                    | mg/L          | 0.005 - 0.005              | No                                    | 0.002 - 0.010   |
| De-ethylated atrazine                          | --   | 0.010                                    | µg/L          | N/A - N/A                  | N/A                                   | 0.010 - 0.140   |
| Dissolved Organic Carbon                       | --   | 0.2                                      | mg/L          | 1.600 - 2.300              | No                                    | 0.400 - 2.300   |
| Ethylbenzene                                   | --   | 0.33                                     | µg/L          | 0.500 - 0.500              | No                                    | 0.002 - 1.000   |
| Field pH                                       | --   | --                                       | units         | N/A - N/A                  | N/A                                   | 6.660 - 8.600   |
| Gross Alpha                                    | --   | 0.100                                    | Bq/l          | N/A - N/A                  | N/A                                   | 0.100 - 0.100   |
| Gross Beta                                     | --   | 0.100                                    | Bq/l          | N/A - N/A                  | N/A                                   | 0.100 - 0.100   |
| Hardness                                       | --   | 0.1                                      | mg/L as CaCO3 | 95 - 119.0                 | No                                    | 95.000 - 133.0  |
| Iron   | --   | 0.005                                    | µg/L          | 0.005 - 0.005              | No                                    | 0.005 - 90.000  |
| Langolier's Index                              | --   | 0.000                                    | @ 20 C        | -0.152 - 0.086             | No                                    | -1.070 - -0.130   |
| m' p-xylene                                    | --   | 0.39                                     | µg/L          | 1.000 - 1.000              | No                                    | 0.390 - 5.000   |
| Magnesium                                      | --   | 0.003                                    | mg/L          | 7.640 - 8.570              | No                                    | 7.150 - 9.400   |
| Manganese                                      | --   | 0.001                                    | µg/L          | 0.001 - 0.001              | No                                    | 0.001 - 168.0   |
| Nickel   | --   | 0.010                                    | µg/L          | 0.010 - 0.010              | No                                    | 0.01 - 1.4  |
| Nitrogen-Kjeldahl (N)                          | --   | 0.05                                     | mg/L          | 0.050 - 0.050              | No                                    | 0.050 - 0.500   |
| Organic Nitrogen                               | --   | 0.05                                     | mg/L          | 0.050 - 0.050              | No                                    | 0.040 - 0.340   |
| o-xylene                                       | --   | 0.17                                     | µg/L          | 0.500 - 0.500              | No                                    | 0.170 - 5.000   |
| pH   | --   | 0.05                                     | no unit       | 7.930 - 7.960              | No                                    | 7.050 - 8.110   |
| Potassium                                      | --   | 0.01                                     | mg/L          | 0.800 - 1.300              | No                                    | 0.800 - 1.910   |
| Silica   | --   | 0.01                                     | mg/L          | 0.730 - 1.660              | No                                    | 0.590 - 2.1   |
| Silver   | --   | 0.00002                                  | µg/L          | 0.000 - 0.000              | No                                    | 0.000 - 0.100   |
| Solids (Total Dissolved)                       | --   | 30                                       | mg/L          | 131.0 - 180.0              | No                                    | 1.460 - 208.0   |
| Sulphate                                       | --   | 0.06                                     | mg/L          | 29.000 - 37.000            | No                                    | 27.000 - 55.000   |
| Sulphide                                       | --   | 0.004                                    | mg/L          | 0.010 - 0.010              | No                                    | 0.004 - 4.000   |
| Surr 1,2-Dichloroethane-d4                     | --   | --                                       | mg/L          | N/A - N/A                  | N/A                                   | 104.00 - 105.00   |
| Surr 4-Bromofluorobenzene                      | --   | --                                       | Surr Rec %    | N/A - N/A                  | N/A                                   | 97.000 - 99.000   |
| Surr Decachlorobiphenyl                        | --   | --                                       | %             | N/A - N/A                  | N/A                                   | 94.000 - 95.000   |
| Toluene  | --   | 0.36                                     | µg/L          | 0.500 - 0.500              | No                                    | 0.005 - 1.000   |
| Total Chlorine                                 | --   | 0.550                                    | mg/L          | N/A - N/A                  | N/A                                   | 0.520 - 1.800   |
| Total Phosphorus                               | --   | 0.010                                    | mg/L          | 0.010 - 0.010              | No                                    | 0.010 - 0.070   |
| Toxaphene                                      | --   | 5.000                                    | µg/L          | N/A - N/A                  | N/A                                   | 0.010 - 5.000   |
| 2,4,5-TP (Silvex)                              | --   | 0.130                                    | µg/L          | N/A - N/A                  | N/A                                   | 0.010 - 5.000   |
| Tritium  | 7000   | 15.0                                     | Bq/l          | N/A - N/A                  | N/A                                   | 15 - 15   |
| Turbidity                                      | 1  | 0.13                                     | NTU           | 0.300 - 0.300              | No                                    | 0.030 - 0.500   |
| Xylene; total                                  | --   | 0.39                                     | µg/L          | 1.100 - 1.100              | No                                    | 0.005 - 5.000   |
| Zinc   | --   | 1  | µg/L          | 0.005 - 0.005              | No                                    | 0.005 - 100.0   |

<sup>1</sup>ODWS - Ontario Drinking Water Standards

<sup>2</sup>Historical range goes back to 2000

<sup>3</sup>Sodium is regulated to be tested every 60 months

<sup>4</sup>The City of London consistently goes beyond the minimum testing requirements of the ODWS and samples these parameters as well

There were eight (8) adverse microbiological results out of 2,735 samples taken; all due to unacceptable levels of Total Coliform bacteria (ranging from 1 to 9 cfu/100 mL). In each case, standard response procedures were enacted. All sites were re-sampled immediately, and the re-sample results revealed no adverse indicators.

It is highly unlikely that there were 'actual' water quality issues at these sites, as the eight adverse samples were identified as having free chlorine residuals which were well above the minimum acceptable level at the time of the sampling (ranging between 0.26 to 1.13 mg/L). Coliform bacteria cannot survive in chlorinated water; therefore, it is suspected that post-sampling contamination occurred. The re-sampling results support this conclusion. The microbiological testing procedure is extremely sensitive. Accidental sample contamination can occur through operator or laboratory error, despite the specific procedures and precautions adhered to.

There was one (1) incident of an inorganic adverse. Sodium levels entering the London Water Distribution System from the Elgin Area Primary Water Supply System were elevated. Our sampling indicated a level of 20.3 mg/L. Although there is no actual Maximum Acceptable Level for sodium concentration in drinking water (there is an Aesthetic Objective Level, which is to target less than 200 mg/L) there is a threshold for sodium at which the local Health Unit must be notified. This mandatory reporting limit is 20 mg/L, and if it is exceeded, an adverse water quality indicator is triggered. This occurred on June 25, 2013 and notices were published on August 8, 2013.

## **System Statistics and Major Events**

During the period from January 1, 2013 through to December 31, 2013 a total of 45,888,044,000 litres of water were purchased from the Joint Water Boards and subsequently pumped into London via the Arva Pumping Station and EMPS. Average day demand was 125,720,670 litres. Peak day pumpage of 165,464,000 litres occurred on July 18, 2013.

A summary of system pumpage can be found in Appendix 'C'. The data includes monthly average and maximum daily flows. These values are also compared to the rated flow rate capacities identified in London's Municipal Drinking Water Licence. There were no occurrences of flow rate exceedance during the specified time period.

Listed below are some 2013 statistics for the City of London Distribution System.

|   |                        |
|---|------------------------|
| <b>Approximate Replacement Value of Drinking Water System</b> | <b>\$2,600,000,000</b> |
| <b>Number of Pumping Stations</b>                             | <b>7</b>               |
| <b>Number of Fire Hydrants</b>                                | <b>8,799</b>           |
| <b>Number of Watermain Valves</b>                             | <b>12,647</b>          |
| <b>Total Number of Water Services</b>                         | <b>113,627</b>         |
| ICI Water Services  | 9,667                  |
| Residential Water Services                                    | 103,960                |
| <b>Length of Watermain</b>                                    | <b>1,560 km</b>        |
| Length of New Watermain Installed                             | 3.6 km                 |
| Length of Watermain Replaced                                  | 4.2 km                 |
| Length of Watermain Rehabilitated                             | 8.5 km                 |
| <b>Number of Watermain Breaks</b>                             | <b>148</b>             |

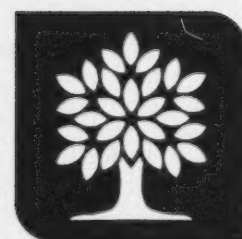
### **Municipalities Receiving London Water**

In the Municipality of Middlesex Centre, Arva Village, Ballymote, and Delaware continued to receive their drinking water under contract from the City of London during 2013. The Municipality of Middlesex Centre has been provided a copy of the Annual Report as per O. Reg 170/03.

Several residences within Central Elgin also continued to receive drinking water from the transmission watermain that supplies the City of London from the EMPS. For this reason, Central Elgin has also been provided a copy of the report.



**Appendix 'A'**  
**2013 Annual Report**  
**(London)**



**London**  
CANADA



|                                   |                                       |
|-----------------------------------|---------------------------------------|
| Drinking-Water System Number:     | 260004917                             |
| Municipal Drinking-Water Licence: | 006-101                               |
| Drinking-Water System Name:       | London Water Supply                   |
| Drinking-Water System Owner:      | The Corporation of the City of London |
| Drinking-Water System Category:   | Large Municipal Residential System    |
| Period being reported:            | January 1, 2013 to December 31, 2013  |

**Complete if your Category is Large Municipal Residential or Small Municipal Residential**

Does your Drinking-Water System serve more than 10,000 people? Yes ☒ No ☐

Is your annual report available to the public at no charge on a web site on the Internet? Yes ☒ No ☐

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

City of London – City Hall  
Customer Service Division – 8<sup>th</sup> Floor  
(Public Service Information Area)  
300 Dufferin Avenue, London, ON

**Complete for all other Categories.**

Number of Designated Facilities served:  
N/A

Did you provide a copy of your annual report to all Designated Facilities you serve? Yes ☐ No ☐

Number of Interested Authorities you report to:  
N/A

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes ☐ No ☐

**Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report**

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

| Drinking Water System Name           | Drinking Water System Number |
|--------------------------------------|------------------------------|
| Middlesex Centre Distribution System | 260004202                    |
| Includes: Arva Waterworks            | 260004202                    |
| Ballymote Waterworks                 | 260004202                    |
| Delaware Distribution System         | 260063323                    |

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water? Yes ☒ No ☐



Indicate how you notified system users that your annual report is available, and is free of charge.

- ☒ Public access/notice via the web
- ☒ Public access/notice via Government Office
- ☐ Public access/notice via a newspaper
- ☐ Public access/notice via Public Request
- ☐ Public access/notice via a Public Library
- ☒ Public access/notice via other method \_EnviroWorks Pamphlet\_\_

**Describe your Drinking-Water System**

There are two water supplies in the City of London: primary sources of surface water and emergency back-up sources of well water in stand-by mode.

1. Primary Treated Water Sources (surface water)
  - Lake Huron Primary Water Supply System (LHPWSS)
  - Elgin Area Primary Water Supply System (EAPWSS)
2. Stand-by Emergency Wells
  - Fanshawe Well Field (6 Wells) – GUDI with in-situ filtration
  - Hyde Park Well – Not GUDI

During 2013 the London-Elgin-Middlesex Booster Station was operated by a designated Operating Authority that being, Ontario Clean Water Agency. The annual report for the London-Elgin-Middlesex Booster Station was not available at the time this report was created and therefore, it will be provided under separate cover.

**List all water treatment chemicals used over this reporting period**

- Liquid Chlorine
- Sodium Hypochlorite
- Fluorosilicic Acid (hydrofluorosilicic acid)

**Were any significant expenses incurred to?**

- ☒ Install required equipment
- ☐ Repair required equipment
- ☒ Replace required equipment

**Please provide a brief description and a breakdown of monetary expenses incurred**

Installing acoustic monitoring fibre optic cable into the major Trunk Transmission Main from Arva Pumping Station through to the Springbank Reservoir. This project has spanned several years and was completed in 2013.

Southeast Reservoir and Pumping Station continues construction. Project funding is a joint effort between Federal, Provincial, and Municipal governments and is part of the larger H.E.L.P. Clean Water initiative.



Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre.

| Bacteriological Adverse |                   |                        |  |                    |                            |                            |                 |
|-------------------------|-------------------|------------------------|--|--------------------|----------------------------|----------------------------|-----------------|
| Adverse Incident Date   | Corrective Action | Corrective Action Date | Adverse Water Quality Indicator # (AWQI #) | Parameters         |                            |                            |                 |
|                         |                   |                        |  | E.Coli (cfu/100ml) | Total Coliform (cfu/100ml) | HPC / Background (cfu/1ml) | Free Cl2 (mg/L) |
| 2013-01-14 <sup>1</sup> |                   |                        | 109759                                     | 0                  | 6                          | 0                          | 1.13            |
|                         | Resample          | 15/Jan/13              |  | 0                  | 0                          | 20                         | 1.00            |
| 2013-06-27 <sup>2</sup> |                   |                        | 112023                                     | 0                  | 9                          | 27                         | 0.81            |
|                         | Resample          | 29/Jun/13              |  | 0                  | 0                          | 0                          | 0.60            |
| 2013-07-16 <sup>3</sup> |                   |                        | 112556                                     | 0                  | 1                          | 0                          | 0.52            |
|                         | Resample          | 17/Jul/13              |  | 0                  | 0                          | 0                          | 0.56            |
| 2013-08-14 <sup>4</sup> |                   |                        | 113451                                     | 0                  | 2                          | 0                          | 0.26            |
|                         | Resample          | 16/Aug/13              |  | 0                  | 0                          | 0                          | 0.30            |
| 2013-08-19 <sup>5</sup> |                   |                        | 113524                                     | 0                  | 2                          | 37                         | 0.62            |
|                         | Resample          | 21/Aug/13              |  | 0                  | 0                          | 2                          | 0.78            |
| 2013-08-21 <sup>6</sup> |                   |                        | 113567                                     | 0                  | 1                          | 0                          | 0.55            |
|                         | Resample          | 22/Aug/13              |  | 0                  | 0                          | 0                          | 0.80            |
| 2013-09-09 <sup>7</sup> |                   |                        | 114218                                     | 0                  | 5                          | 18                         | 0.46            |
|                         | Resample          | 21/Sep/13              |  | 0                  | 0                          | 0                          | 0.75            |
| 2013-12-16 <sup>8</sup> |                   |                        | 115735                                     | 0                  | 2                          | 0                          | 0.78            |
|                         | Resample          | 18/Dec/13              |  | 0                  | 0                          | 0                          | 1.00            |

| Inorganic Adverse       |          |                        |  |               |
|-------------------------|----------|------------------------|--|---------------|
| Adverse Incident Date   | Time     | Corrective Action Date | Adverse Water Quality Indicator # (AWQI #) | Parameter     |
|                         |          |                        |  | Sodium (mg/L) |
| 2013-06-25 <sup>9</sup> |          |                        | 112048                                     | 20.3          |
|                         | Resample | 3/Jul/13               |  | 20.2          |





## Notes:

<sup>1</sup>Fire hydrant at the northeast corner of York and William: Adverse Result: Total Coliform > 0

Corrective Action: The original site was immediately re-sampled. There were no indicators of adverse water quality in any or the re-sample results. Free chlorine concentration of 1.13 mg/L for the original sample is indicative of a false positive.

<sup>2</sup>100 Kellogg Lane (4" Service Hose Bib): Adverse Result: Total Coliform > 0

Corrective Action: The original site was immediately re-sampled. There were no indicators of adverse water quality in any or the re-sample results. Free chlorine concentration of 0.81 mg/L for the original sample is indicative of a false positive.

<sup>3</sup>101 Alania (Fire Hydrant): Adverse Result: Total Coliform > 0

Corrective Action: The original site was immediately re-sampled. There were no indicators of adverse water quality in any or the re-sample results. Free chlorine concentration of 0.52 mg/L for the original sample is indicative of a false positive.

<sup>4</sup>760 Hyde Park Road (Fire Hydrant): Adverse Result: Total Coliform > 0

Corrective Action: The original site was immediately re-sampled. There were no indicators of adverse water quality in any or the re-sample results. Free chlorine concentration of 0.26 mg/L for the original sample is indicative of a false positive.

<sup>5</sup>530 Ridout Street North (Fire Hydrant): Adverse Result: Total Coliform > 0

Corrective Action: The original site was immediately re-sampled. There were no indicators of adverse water quality in any or the re-sample results. Free chlorine concentration of 0.62 mg/L for the original sample is indicative of a false positive.

<sup>6</sup>Southeast corner of Ridout Street North & Albert Street (Fire Hydrant): Adverse Result: Total Coliform > 0

Corrective Action: The original site was immediately re-sampled. There were no indicators of adverse water quality in any or the re-sample results. Free chlorine concentration of 0.55 mg/L for the original sample is indicative of a false positive.

<sup>7</sup>131 Woodward Avenue (Fire Hydrant): Adverse Result: Total Coliform > 0

Corrective Action: The original site was immediately re-sampled. There were no indicators of adverse water quality in any or the re-sample results. Free chlorine concentration of 0.46 mg/L for the original sample is indicative of a false positive.

<sup>8</sup>50 Wychwood Park (Orchard Park PS – Citywide Sampling Site): Adverse Result: Total Coliform > 0

Corrective Action: The original site was immediately re-sampled. There were no indicators of adverse water quality in any or the re-sample results. Free chlorine concentration of 0.78 mg/L for the original sample is indicative of a false positive.

<sup>9</sup>2003 Dingman Drive (Sampling Chamber): Adverse Result: Sodium > 20 ug/L

Corrective Action: The original site was immediately re-sampled (the result was a sodium level of 20.2 mg/L) and a media release was issued indicating the sodium levels in some parts of the city could be above 20 mg/L.



Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

|              | # of E. Coli Samples Taken | Range of E. Coli (cfu/100mL) | # of Total Coliform Samples Taken | Range of Coliform (cfu/100mL) | # of HPC / Background Samples | Range of HPC (cfu/1mL) |
|--------------|----------------------------|------------------------------|-----------------------------------|-------------------------------|-------------------------------|------------------------|
| Raw          | 10                         | 0 - 0                        | 10                                | 0 - 0                         | 10                            | <10 - 60               |
| Treated      | N/A                        | N/A                          | N/A                               | N/A                           | N/A                           | N/A                    |
| Distribution | 2735                       | 0 - 0                        | 2735                              | 0 - 9                         | 2735                          | 0 - 2000               |

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

|              | # of Grab Samples | Continuous Monitoring | Range of Results                     |
|--------------|-------------------|-----------------------|--------------------------------------|
| Turbidity    |                   |                       |                                      |
| Distribution | 2                 | N/A                   | 0.3 - 0.3 NTU                        |
| Raw          | 7                 | N/A                   | 0.3 - 1.1 NTU                        |
| Lead         | 10                | N/A                   | 0.06 - 0.57 ug/L                     |
| Field pH     | 12                | N/A                   | 7.93 - 8.2                           |
| Alkalinity   | 22                | N/A                   | 75.9 - 103 mg/L as CaCO <sub>3</sub> |
| Sodium       | 51                | N/A                   | 10.7 - 24.5 mg/L                     |
| Chlorine     | 2753              | 87600                 | 0.11 - 2.2 mg/L                      |
| Fluoride     | 110               | 8760                  | 0.07 - .80 mg/L                      |

**NOTE:** For continuous monitors use 8760 as the number of samples.



As outlined below, sampling was carried out in accordance with the requirements listed in the City of London's 2010 Drinking Water Licence for inorganic and organic parameters at the following sites: Fanshawe Wells (No. 1 through No. 6) and Hyde Park Well.

## SITE: Hyde Park Well - Raw

### a) INORGANIC PARAMETERS (including lead, sodium, nitrate, nitrite, and fluoride)

| Date of Municipal Drinking Water Licence | Parameter                       | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|---------------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Antimony                        | 26/Jun/13   | 0.1          | ug/L            | N          |
| December 17, 2010                        | Arsenic                         | 26/Jun/13   | 0.3          | ug/L            | N          |
| December 17, 2010                        | Barium                          | 26/Jun/13   | 112          | ug/L            | N          |
| December 17, 2010                        | Boron                           | 26/Jun/13   | 33           | ug/L            | N          |
| December 17, 2010                        | Cadmium                         | 26/Jun/13   | 0.06         | ug/L            | N          |
| December 17, 2010                        | Chromium                        | 26/Jun/13   | 2 <MDL       | ug/L            | N          |
| December 17, 2010                        | Fluoride                        | 26/Jun/13   | 0.3          | mg/L            | N          |
| December 17, 2010                        | Mercury                         | 26/Jun/13   | 0.02 <MDL    | ug/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 5/Mar/13    | 2.3          | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 26/Jun/13   | 1.9          | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 16/Sep/13   | 1.9          | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 9/Dec/13    | 2.21         | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 5/Mar/13    | 2.3          | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 26/Jun/13   | 1.9          | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 16/Sep/13   | 1.9          | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 9/Dec/13    | 2.21         | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 5/Mar/13    | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 26/Jun/13   | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 16/Sep/13   | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 9/Dec/13    | 0.05 <RDL    | mg/L            | N          |
| December 17, 2010                        | Selenium                        | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Sodium                          | 26/Jun/13   | 53.8         | mg/L            | N          |
| December 17, 2010                        | Uranium                         | 26/Jun/13   | 0.62         | ug/L            | N          |



## b) ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                                  | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alachlor                                   | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Aldicarb                                   | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Aldrin + Dieldrin                          | 26/Jun/13   | 0.02 <MDL    | ug/L            | N          |
| December 17, 2010                        | Atrazine + N-dealkylated metabolites       | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Azinphos-methyl                            | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Bendiocarb                                 | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Benzene                                    | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Benzo(a)pyrene                             | 26/Jun/13   | 0.005 <MDL   | ug/L            | N          |
| December 17, 2010                        | Bromoxynil                                 | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Carbaryl                                   | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Carbofuran                                 | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Carbon tetrachloride                       | 26/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Chlordane (Total)                          | 26/Jun/13   | 0.04 <MDL    | ug/L            | N          |
| December 17, 2010                        | Chlorpyrifos                               | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Cyanazine                                  | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Diazinon                                   | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Dicamba                                    | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichlorobenzene                        | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 1,4-Dichlorobenzene                        | 26/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dichlorodiphenyltrichloroethane (DDT) + Me | 26/Jun/13   | 0.01 <MDL    | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichloroethane                         | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 1,1-Dichloroethylene (vinylidene chloride) | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dichloromethane                            | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenol                         | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenoxyacetic acid (2,4-D)     | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Diclofop-methyl                            | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dimethoate                                 | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Dinoseb                                    | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Diquat                                     | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Diuron                                     | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Glyphosate                                 | 26/Jun/13   | 25 <MDL      | ug/L            | N          |
| December 17, 2010                        | Heptachlor + Heptachlor Epoxide            | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Lindane (Total)                            | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Malathion                                  | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Methoxychlor                               | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Metolachlor                                | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Metribuzin                                 | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Monochlorobenzene                          | 26/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Paraquat                                   | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Parathion                                  | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Pentachlorophenol                          | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Phorate                                    | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Picloram                                   | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Polychlorinated Biphenyls (PCBs)           | 26/Jun/13   | 0.05 <MDL    | ug/L            | N          |
| December 17, 2010                        | Prometryne                                 | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |





|                   |   |           |          |      |   |
|-------------------|---|-----------|----------|------|---|
| December 17, 2010 | Simazine                                    | 26/Jun/13 | 0.5 <MDL | ug/L | N |
| December 17, 2010 | Temephos                                    | 26/Jun/13 | 10 <MDL  | ug/L | N |
| December 17, 2010 | Terbufos                                    | 26/Jun/13 | 0.3 <MDL | ug/L | N |
| December 17, 2010 | Tetrachloroethylene (perchloroethylene)     | 26/Jun/13 | 0.2 <MDL | ug/L | N |
| December 17, 2010 | 2,3,4,6-tetrachlorophenol                   | 26/Jun/13 | 0.1 <MDL | ug/L | N |
| December 17, 2010 | Triallate                                   | 26/Jun/13 | 10 <MDL  | ug/L | N |
| December 17, 2010 | Trichloroethylene                           | 26/Jun/13 | 0.1 <MDL | ug/L | N |
| December 17, 2010 | 2,4,6-trichlorophenol                       | 26/Jun/13 | 0.1 <MDL | ug/L | N |
| December 17, 2010 | 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) | 26/Jun/13 | 10 <MDL  | ug/L | N |
| December 17, 2010 | Trifluralin                                 | 26/Jun/13 | 0.5 <MDL | ug/L | N |
| December 17, 2010 | Vinyl Chloride                              | 26/Jun/13 | 0.2 <MDL | ug/L | N |

## c) NON-REGULATED INORGANIC/ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alkalinity               | 26/Jun/13   | 285          | mg/L            | N          |
| December 17, 2010                        | Aluminum                 | 26/Jun/13   | 0.04         | mg/L            | N          |
| December 17, 2010                        | Ammonia+Ammonium (N)     | 26/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Calcium                  | 26/Jun/13   | 91.7         | mg/L            | N          |
| December 17, 2010                        | Chloride                 | 26/Jun/13   | 85.7         | mg/L            | N          |
| December 17, 2010                        | Cobalt                   | 26/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Conductivity             | 26/Jun/13   | 885          | uS/cm           | N          |
| December 17, 2010                        | Copper                   | 26/Jun/13   | 0.019        | mg/L            | N          |
| December 17, 2010                        | Cyanide                  | 26/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Dissolved Organic Carbon | 26/Jun/13   | 2.6          | mg/L            | N          |
| December 17, 2010                        | Ethylbenzene             | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Hardness                 | 26/Jun/13   | 323          | mg/L            | N          |
| December 17, 2010                        | Iron                     | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Langelier's Index        | 26/Jun/13   | 1.01         | @25 C           | N          |
| December 17, 2010                        | Magnesium                | 26/Jun/13   | 22.9         | mg/L            | N          |
| December 17, 2010                        | Manganese                | 26/Jun/13   | 0 <MDL       | mg/L            | N          |
| December 17, 2010                        | Nickel                   | 26/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Organic Nitrogen         | 26/Jun/13   | 0.2          | mg/L            | N          |
| December 17, 2010                        | pH                       | 26/Jun/13   | 8.05         | mg/L            | N          |
| December 17, 2010                        | Potassium                | 26/Jun/13   | 1.6          | mg/L            | N          |
| December 17, 2010                        | Silica                   | 26/Jun/13   | 12.9         | mg/L            | N          |
| December 17, 2010                        | Silver                   | 26/Jun/13   | 0 <MDL       | mg/L            | N          |
| December 17, 2010                        | Sulphate                 | 26/Jun/13   | 47           | mg/L            | N          |
| December 17, 2010                        | Sulphide                 | 26/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | TDS(ion sum calc.)       | 26/Jun/13   | 483          | mg/L            | N          |
| December 17, 2010                        | Toluene                  | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Total Kjeldahl Nitrogen  | 26/Jun/13   | 0.2          | mg/L            | N          |
| December 17, 2010                        | Total Phosphorus         | 26/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Turbidity                | 26/Jun/13   | 0.3          | NTU             | N          |
| December 17, 2010                        | Xylene (Total)           | 26/Jun/13   | 1.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | m/p-xylene               | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | o-xylene                 | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Zinc                     | 26/Jun/13   | 0.021        | mg/L            | N          |



## SITE: Fanshawe Well #1 - Raw

### a) INORGANIC PARAMETERS (including lead, sodium, nitrate, nitrite, and fluoride)

| Date of Municipal Drinking Water Licence | Parameter                       | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|---------------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Antimony                        | 26/Jun/13   | 0.1          | ug/L            | N          |
| December 17, 2010                        | Arsenic                         | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Barium                          | 26/Jun/13   | 40           | ug/L            | N          |
| December 17, 2010                        | Boron                           | 26/Jun/13   | 77           | ug/L            | N          |
| December 17, 2010                        | Cadmium                         | 26/Jun/13   | 0.02         | ug/L            | N          |
| December 17, 2010                        | Chromium                        | 26/Jun/13   | 2 <MDL       | ug/L            | N          |
| December 17, 2010                        | Fluoride                        | 26/Jun/13   | 0.2          | mg/L            | N          |
| December 17, 2010                        | Mercury                         | 26/Jun/13   | 0.02 <MDL    | ug/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 5/Mar/13    | 1            | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 26/Jun/13   | 1            | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 16/Sep/13   | 1            | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 9/Dec/13    | 0.88         | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 5/Mar/13    | 1            | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 26/Jun/13   | 1            | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 16/Sep/13   | 1            | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 9/Dec/13    | 0.88         | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 5/Mar/13    | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 26/Jun/13   | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 16/Sep/13   | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 9/Dec/13    | 0.05 <RDL    | mg/L            | N          |
| December 17, 2010                        | Selenium                        | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Sodium*                         | 26/Jun/13   | 24.8         | mg/L            | N          |
| December 17, 2010                        | Uranium                         | 26/Jun/13   | 0.55         | ug/L            | N          |



## b) ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                                  | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alachlor                                   | 26/Jun/13   | 0.300 <MDL   | ug/L            | N          |
| December 17, 2010                        | Aldicarb                                   | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Aldrin + Dieldrin                          | 26/Jun/13   | 0.020 <MDL   | ug/L            | N          |
| December 17, 2010                        | Atrazine + N-dealkylated metabolites       | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Azinphos-methyl                            | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Bendiocarb                                 | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Benzene                                    | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Benzo(a)pyrene                             | 26/Jun/13   | 0.005 <MDL   | ug/L            | N          |
| December 17, 2010                        | Bromoxynil                                 | 26/Jun/13   | 0.300 <MDL   | ug/L            | N          |
| December 17, 2010                        | Carbaryl                                   | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Carbofuran                                 | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Carbon tetrachloride                       | 26/Jun/13   | 0.200 <MDL   | ug/L            | N          |
| December 17, 2010                        | Chlordane (Total)                          | 26/Jun/13   | 0.040 <MDL   | ug/L            | N          |
| December 17, 2010                        | Chlorpyrifos                               | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Cyanazine                                  | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Diazinon                                   | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dicamba                                    | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichlorobenzene                        | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | 1,4-Dichlorobenzene                        | 26/Jun/13   | 0.200 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dichlorodiphenyltrichloroethane (DDT) + Me | 26/Jun/13   | 0.010 <MDL   | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichloroethane                         | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | 1,1-Dichloroethylene (vinylidene chloride) | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dichloromethane                            | 26/Jun/13   | 0.300        | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenol                         | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenoxyacetic acid (2,4-D)     | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Diclofop-methyl                            | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dimethoate                                 | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dinoseb                                    | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Diquat                                     | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Diuron                                     | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Glyphosate                                 | 26/Jun/13   | 25.0 <MDL    | ug/L            | N          |
| December 17, 2010                        | Heptachlor + Heptachlor Epoxide            | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Lindane (Total)                            | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Malathion                                  | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Methoxychlor                               | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Metolachlor                                | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Metribuzin                                 | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Monochlorobenzene                          | 26/Jun/13   | 0.200 <MDL   | ug/L            | N          |
| December 17, 2010                        | Paraquat                                   | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Parathion                                  | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Pentachlorophenol                          | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Phorate                                    | 26/Jun/13   | 0.300 <MDL   | ug/L            | N          |
| December 17, 2010                        | Picloram                                   | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Polychlorinated Biphenyls (PCBs)           | 26/Jun/13   | 0.050 <MDL   | ug/L            | N          |
| December 17, 2010                        | Prometryne                                 | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Simazine                                   | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |



|                   |   |           |            |      |   |
|-------------------|---|-----------|------------|------|---|
| December 17, 2010 | Temephos                                    | 26/Jun/13 | 10.0 <MDL  | ug/L | N |
| December 17, 2010 | Terbufos                                    | 26/Jun/13 | 0.300 <MDL | ug/L | N |
| December 17, 2010 | Tetrachloroethylene (perchloroethylene)     | 26/Jun/13 | 0.200 <MDL | ug/L | N |
| December 17, 2010 | 2,3,4,6-tetrachlorophenol                   | 26/Jun/13 | 0.100 <MDL | ug/L | N |
| December 17, 2010 | Triallate                                   | 26/Jun/13 | 10.0 <MDL  | ug/L | N |
| December 17, 2010 | Trichloroethylene                           | 26/Jun/13 | 0.100 <MDL | ug/L | N |
| December 17, 2010 | 2,4,6-trichlorophenol                       | 26/Jun/13 | 0.100 <MDL | ug/L | N |
| December 17, 2010 | 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) | 26/Jun/13 | 10.0 <MDL  | ug/L | N |
| December 17, 2010 | Trifluralin                                 | 26/Jun/13 | 0.500 <MDL | ug/L | N |
| December 17, 2010 | Vinyl Chloride                              | 26/Jun/13 | 0.200 <MDL | ug/L | N |





## c) NON-REGULATED INORGANIC/ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alkalinity               | 26/Jun/13   | 294          | mg/L            | N          |
| December 17, 2010                        | Aluminum                 | 26/Jun/13   | 0.04         | mg/L            | N          |
| December 17, 2010                        | Ammonia+Ammonium (N)     | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Azoxystrobin             | 26/Jun/13   | 0.02         | ug/L            | N          |
| December 17, 2010                        | Calcium                  | 26/Jun/13   | 107          | mg/L            | N          |
| December 17, 2010                        | Chloride                 | 26/Jun/13   | 48.4         | mg/L            | N          |
| December 17, 2010                        | Cobalt                   | 26/Jun/13   | 0.005        | mg/L            | N          |
| December 17, 2010                        | Conductivity             | 26/Jun/13   | 792          | uS/cm           | N          |
| December 17, 2010                        | Copper                   | 26/Jun/13   | 0.003        | mg/L            | N          |
| December 17, 2010                        | Cyanide                  | 26/Jun/13   | 0.005        | mg/L            | N          |
| December 17, 2010                        | Dissolved Organic Carbon | 26/Jun/13   | 3.4          | mg/L            | N          |
| December 17, 2010                        | Ethylbenzene             | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Fludioxonil              | 26/Jun/13   | 0.01         | ug/L            | N          |
| December 17, 2010                        | Hardness                 | 26/Jun/13   | 358          | mg/L            | N          |
| December 17, 2010                        | Iron                     | 26/Jun/13   | 0.022        | mg/L            | N          |
| December 17, 2010                        | Langelier's Index        | 26/Jun/13   | 0.834        | @25 C           | N          |
| December 17, 2010                        | Magnesium                | 26/Jun/13   | 22           | mg/L            | N          |
| December 17, 2010                        | Manganese                | 26/Jun/13   | 0.001        | mg/L            | N          |
| December 17, 2010                        | Nickel                   | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Organic Nitrogen         | 26/Jun/13   | 0.26         | mg/L            | N          |
| December 17, 2010                        | pH                       | 26/Jun/13   | 7.8          | mg/L            | N          |
| December 17, 2010                        | Potassium                | 26/Jun/13   | 1.8          | mg/L            | N          |
| December 17, 2010                        | Silica                   | 26/Jun/13   | 8.33         | mg/L            | N          |
| December 17, 2010                        | Silver                   | 26/Jun/13   | 0.00002      | mg/L            | N          |
| December 17, 2010                        | Sulphate                 | 26/Jun/13   | 54           | mg/L            | N          |
| December 17, 2010                        | Sulphide                 | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | TDS(ion sum calc.)       | 26/Jun/13   | 439          | mg/L            | N          |
| December 17, 2010                        | Toluene                  | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Total Kjeldahl Nitrogen  | 26/Jun/13   | 0.26         | mg/L            | N          |
| December 17, 2010                        | Total Phosphorus         | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Turbidity                | 26/Jun/13   | 0.7          | NTU             | N          |
| December 17, 2010                        | Xylene (Total)           | 26/Jun/13   | 1.1          | ug/L            | N          |
| December 17, 2010                        | m/p-xylene               | 26/Jun/13   | 1            | ug/L            | N          |
| December 17, 2010                        | o-xylene                 | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Zinc                     | 26/Jun/13   | 0.005        | mg/L            | N          |



## SITE: Fanshawe Well #2 - Raw

### a) INORGANIC PARAMETERS (including lead, sodium, nitrate, nitrite, and fluoride)

| Date of Municipal Drinking Water Licence | Parameter                       | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|---------------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Antimony                        | 26/Jun/13   | 0.1          | ug/L            | N          |
| December 17, 2010                        | Arsenic                         | 26/Jun/13   | 0.4          | ug/L            | N          |
| December 17, 2010                        | Barium                          | 26/Jun/13   | 38           | ug/L            | N          |
| December 17, 2010                        | Boron                           | 26/Jun/13   | 39           | ug/L            | N          |
| December 17, 2010                        | Cadmium                         | 26/Jun/13   | 0.02         | ug/L            | N          |
| December 17, 2010                        | Chromium                        | 26/Jun/13   | 2 <MDL       | ug/L            | N          |
| December 17, 2010                        | Fluoride                        | 26/Jun/13   | 0.2          | mg/L            | N          |
| December 17, 2010                        | Mercury                         | 26/Jun/13   | 0.02 <MDL    | ug/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 5/Mar/13    | 0.2          | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 26/Jun/13   | 0.5          | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 16/Sep/13   | 0.3          | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 9/Dec/13    | 0.11         | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 5/Mar/13    | 0.2          | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 26/Jun/13   | 0.5          | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 16/Sep/13   | 0.3          | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 9/Dec/13    | 0.11         | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 5/Mar/13    | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 26/Jun/13   | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 16/Sep/13   | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 9/Dec/13    | 0.05 <RDL    | mg/L            | N          |
| December 17, 2010                        | Selenium                        | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Sodium*                         | 26/Jun/13   | 26.6         | mg/L            | N          |
| December 17, 2010                        | Uranium                         | 26/Jun/13   | 0.59         | ug/L            | N          |



## b) ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                                  | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alachlor                                   | 26/Jun/13   | 0.300 <MDL   | ug/L            | N          |
| December 17, 2010                        | Aldicarb                                   | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Aldrin + Dieldrin                          | 26/Jun/13   | 0.020 <MDL   | ug/L            | N          |
| December 17, 2010                        | Atrazine + N-dealkylated metabolites       | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Azinphos-methyl                            | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Bendiocarb                                 | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Benzene                                    | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Benzo(a)pyrene                             | 26/Jun/13   | 0.005 <MDL   | ug/L            | N          |
| December 17, 2010                        | Bromoxynil                                 | 26/Jun/13   | 0.300 <MDL   | ug/L            | N          |
| December 17, 2010                        | Carbaryl                                   | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Carbofuran                                 | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Carbon tetrachloride                       | 26/Jun/13   | 0.200 <MDL   | ug/L            | N          |
| December 17, 2010                        | Chlordane (Total)                          | 26/Jun/13   | 0.040 <MDL   | ug/L            | N          |
| December 17, 2010                        | Chlorpyrifos                               | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Cyanazine                                  | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Diazinon                                   | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dicamba                                    | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichlorobenzene                        | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | 1,4-Dichlorobenzene                        | 26/Jun/13   | 0.200 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dichlorodiphenyltrichloroethane (DDT) + Me | 26/Jun/13   | 0.010 <MDL   | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichloroethane                         | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | 1,1-Dichloroethylene (vinylidene chloride) | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dichloromethane                            | 26/Jun/13   | 0.300        | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenol                         | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenoxyacetic acid (2,4-D)     | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Diclofop-methyl                            | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dimethoate                                 | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dinoseb                                    | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Diquat                                     | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Diuron                                     | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Glyphosate                                 | 26/Jun/13   | 25.0 <MDL    | ug/L            | N          |
| December 17, 2010                        | Heptachlor + Heptachlor Epoxide            | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Lindane (Total)                            | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Malathion                                  | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Methoxychlor                               | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Metolachlor                                | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Metribuzin                                 | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Monochlorobenzene                          | 26/Jun/13   | 0.200 <MDL   | ug/L            | N          |
| December 17, 2010                        | Paraquat                                   | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Parathion                                  | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Pentachlorophenol                          | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Phorate                                    | 26/Jun/13   | 0.300 <MDL   | ug/L            | N          |
| December 17, 2010                        | Picloram                                   | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Polychlorinated Biphenyls (PCBs)           | 26/Jun/13   | 0.050 <MDL   | ug/L            | N          |
| December 17, 2010                        | Prometryne                                 | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |



|                   |   |           |            |      |   |
|-------------------|---|-----------|------------|------|---|
| December 17, 2010 | Simazine                                    | 26/Jun/13 | 0.500 <MDL | ug/L | N |
| December 17, 2010 | Temephos                                    | 26/Jun/13 | 10.0 <MDL  | ug/L | N |
| December 17, 2010 | Terbufos                                    | 26/Jun/13 | 0.300 <MDL | ug/L | N |
| December 17, 2010 | Tetrachloroethylene (perchloroethylene)     | 26/Jun/13 | 0.200 <MDL | ug/L | N |
| December 17, 2010 | 2,3,4,6-tetrachlorophenol                   | 26/Jun/13 | 0.100 <MDL | ug/L | N |
| December 17, 2010 | Triallate                                   | 26/Jun/13 | 10.0 <MDL  | ug/L | N |
| December 17, 2010 | Trichloroethylene                           | 26/Jun/13 | 0.100 <MDL | ug/L | N |
| December 17, 2010 | 2,4,6-trichlorophenol                       | 26/Jun/13 | 0.100 <MDL | ug/L | N |
| December 17, 2010 | 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) | 26/Jun/13 | 10.0 <MDL  | ug/L | N |
| December 17, 2010 | Trifluralin                                 | 26/Jun/13 | 0.500 <MDL | ug/L | N |
| December 17, 2010 | Vinyl Chloride                              | 26/Jun/13 | 0.200 <MDL | ug/L | N |





## c) NON-REGULATED INORGANIC/ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alkalinity               | 26/Jun/13   | 273          | mg/L            | N          |
| December 17, 2010                        | Aluminum                 | 26/Jun/13   | 0.03         | mg/L            | N          |
| December 17, 2010                        | Ammonia+Ammonium (N)     | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Azoxystrobin             | 26/Jun/13   | 0.02         | ug/L            | N          |
| December 17, 2010                        | Calcium                  | 26/Jun/13   | 96.3         | mg/L            | N          |
| December 17, 2010                        | Chloride                 | 26/Jun/13   | 64.8         | mg/L            | N          |
| December 17, 2010                        | Cobalt                   | 26/Jun/13   | 0.005        | mg/L            | N          |
| December 17, 2010                        | Conductivity             | 26/Jun/13   | 762          | uS/cm           | N          |
| December 17, 2010                        | Copper                   | 26/Jun/13   | 0.002        | mg/L            | N          |
| December 17, 2010                        | Cyanide                  | 26/Jun/13   | 0.005        | mg/L            | N          |
| December 17, 2010                        | Dissolved Organic Carbon | 26/Jun/13   | 3.3          | mg/L            | N          |
| December 17, 2010                        | Ethylbenzene             | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Fludioxonil              | 26/Jun/13   | 0.01         | ug/L            | N          |
| December 17, 2010                        | Hardness                 | 26/Jun/13   | 324          | mg/L            | N          |
| December 17, 2010                        | Iron                     | 26/Jun/13   | 0.03         | mg/L            | N          |
| December 17, 2010                        | Langelier's Index        | 26/Jun/13   | 0.797        | @25 C           | N          |
| December 17, 2010                        | Magnesium                | 26/Jun/13   | 20.2         | mg/L            | N          |
| December 17, 2010                        | Manganese                | 26/Jun/13   | 0.087        | mg/L            | N          |
| December 17, 2010                        | Nickel                   | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Organic Nitrogen         | 26/Jun/13   | 0.1          | mg/L            | N          |
| December 17, 2010                        | pH                       | 26/Jun/13   | 7.84         | mg/L            | N          |
| December 17, 2010                        | Potassium                | 26/Jun/13   | 2.2          | mg/L            | N          |
| December 17, 2010                        | Silica                   | 26/Jun/13   | 7.39         | mg/L            | N          |
| December 17, 2010                        | Silver                   | 26/Jun/13   | 0.00002      | mg/L            | N          |
| December 17, 2010                        | Sulphate                 | 26/Jun/13   | 26           | mg/L            | N          |
| December 17, 2010                        | Sulphide                 | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | TDS(ion sum calc.)       | 26/Jun/13   | 402          | mg/L            | N          |
| December 17, 2010                        | Total Kjeldahl Nitrogen  | 26/Jun/13   | 0.1          | mg/L            | N          |
| December 17, 2010                        | Toluene                  | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Total Phosphorus         | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Turbidity                | 26/Jun/13   | 0.5          | NTU             | N          |
| December 17, 2010                        | Xylene (Total)           | 26/Jun/13   | 1.1          | ug/L            | N          |
| December 17, 2010                        | m/p-xylene               | 26/Jun/13   | 1            | ug/L            | N          |
| December 17, 2010                        | o-xylene                 | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Zinc                     | 26/Jun/13   | 0.005        | mg/L            | N          |



**SITE: Fanshawe Well #3 - Raw**

**a) INORGANIC PARAMETERS (including lead, sodium, nitrate, nitrite, and fluoride)**

| Date of Municipal Drinking Water Licence | Parameter                       | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|---------------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Antimony                        | 26/Jun/13   | 0.1          | ug/L            | N          |
| December 17, 2010                        | Arsenic                         | 26/Jun/13   | 0.3          | ug/L            | N          |
| December 17, 2010                        | Barium                          | 26/Jun/13   | 41           | ug/L            | N          |
| December 17, 2010                        | Boron                           | 26/Jun/13   | 33           | ug/L            | N          |
| December 17, 2010                        | Cadmium                         | 26/Jun/13   | 0.02         | ug/L            | N          |
| December 17, 2010                        | Chromium                        | 26/Jun/13   | 2 <MDL       | ug/L            | N          |
| December 17, 2010                        | Fluoride                        | 26/Jun/13   | 0.2          | mg/L            | N          |
| December 17, 2010                        | Mercury                         | 26/Jun/13   | 0.02 <MDL    | ug/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 5/Mar/13    | 0.100 <MDL   | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 26/Jun/13   | 0.100        | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 16/Sep/13   | 0.100        | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 9/Dec/13    | 0.050 <RDL   | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 5/Mar/13    | 0.100 <MDL   | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 26/Jun/13   | 0.100        | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 16/Sep/13   | 0.100        | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 9/Dec/13    | 0.070 <RDL   | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 5/Mar/13    | 0.100 <MDL   | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 26/Jun/13   | 0.100 <MDL   | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 16/Sep/13   | 0.100 <MDL   | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 9/Dec/13    | 0.050 <RDL   | mg/L            | N          |
| December 17, 2010                        | Selenium                        | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Sodium*                         | 26/Jun/13   | 19.1         | mg/L            | N          |
| December 17, 2010                        | Uranium                         | 26/Jun/13   | 0.64         | ug/L            | N          |



## b) ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                                  | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alachlor                                   | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Aldicarb                                   | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Aldrin + Dieldrin                          | 26/Jun/13   | 0.02 <MDL    | ug/L            | N          |
| December 17, 2010                        | Atrazine + N-dealkylated metabolites       | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Azinphos-methyl                            | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Bendiocarb                                 | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Benzene                                    | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Benzo(a)pyrene                             | 26/Jun/13   | 0.005 <MDL   | ug/L            | N          |
| December 17, 2010                        | Bromoxynil                                 | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Carbaryl                                   | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Carbofuran                                 | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Carbon tetrachloride                       | 26/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Chlordane (Total)                          | 26/Jun/13   | 0.04 <MDL    | ug/L            | N          |
| December 17, 2010                        | Chlorpyrifos                               | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Cyanazine                                  | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Diazinon                                   | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Dicamba                                    | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichlorobenzene                        | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 1,4-Dichlorobenzene                        | 26/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dichlorodiphenyltrichloroethane (DDT) + Me | 26/Jun/13   | 0.01 <MDL    | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichloroethane                         | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 1,1-Dichloroethylene (vinylidene chloride) | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dichloromethane                            | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenol                         | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenoxyacetic acid (2,4-D)     | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Diclofop-methyl                            | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dimethoate                                 | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Dinoseb                                    | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Diquat                                     | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Diuron                                     | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Glyphosate                                 | 26/Jun/13   | 25 <MDL      | ug/L            | N          |
| December 17, 2010                        | Heptachlor + Heptachlor Epoxide            | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Lindane (Total)                            | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Malathion                                  | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Methoxychlor                               | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Metolachlor                                | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Metribuzin                                 | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Monochlorobenzene                          | 26/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Paraquat                                   | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Parathion                                  | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Pentachlorophenol                          | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Phorate                                    | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Picloram                                   | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Polychlorinated Biphenyls (PCBs)           | 26/Jun/13   | 0.05 <MDL    | ug/L            | N          |
| December 17, 2010                        | Prometryne                                 | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |



|                   |   |           |          |      |   |
|-------------------|---|-----------|----------|------|---|
| December 17, 2010 | Simazine                                    | 26/Jun/13 | 0.5 <MDL | ug/L | N |
| December 17, 2010 | Temephos                                    | 26/Jun/13 | 10 <MDL  | ug/L | N |
| December 17, 2010 | Terbufos                                    | 26/Jun/13 | 0.3 <MDL | ug/L | N |
| December 17, 2010 | Tetrachloroethylene (perchloroethylene)     | 26/Jun/13 | 0.2 <MDL | ug/L | N |
| December 17, 2010 | 2,3,4,6-tetrachlorophenol                   | 26/Jun/13 | 0.1 <MDL | ug/L | N |
| December 17, 2010 | Triallate                                   | 26/Jun/13 | 10 <MDL  | ug/L | N |
| December 17, 2010 | Trichloroethylene                           | 26/Jun/13 | 0.1 <MDL | ug/L | N |
| December 17, 2010 | 2,4,6-trichlorophenol                       | 26/Jun/13 | 0.1 <MDL | ug/L | N |
| December 17, 2010 | 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) | 26/Jun/13 | 10 <MDL  | ug/L | N |
| December 17, 2010 | Trifluralin                                 | 26/Jun/13 | 0.5 <MDL | ug/L | N |
| December 17, 2010 | Vinyl Chloride                              | 26/Jun/13 | 0.2 <MDL | ug/L | N |





## c) NON-REGULATED INORGANIC/ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alkalinity               | 26/Jun/13   | 311          | mg/L            | N          |
| December 17, 2010                        | Aluminum                 | 26/Jun/13   | 0.04         | mg/L            | N          |
| December 17, 2010                        | Ammonia+Ammonium (N)     | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Azoxystrobin             | 26/Jun/13   | 0.02         | ug/L            | N          |
| December 17, 2010                        | Calcium                  | 26/Jun/13   | 98.9         | mg/L            | N          |
| December 17, 2010                        | Chloride                 | 26/Jun/13   | 36           | mg/L            | N          |
| December 17, 2010                        | Cobalt                   | 26/Jun/13   | 0.005        | mg/L            | N          |
| December 17, 2010                        | Conductivity             | 26/Jun/13   | 724          | uS/cm           | N          |
| December 17, 2010                        | Copper                   | 26/Jun/13   | 0.003        | mg/L            | N          |
| December 17, 2010                        | Cyanide                  | 26/Jun/13   | 0.005        | mg/L            | N          |
| December 17, 2010                        | Dissolved Organic Carbon | 26/Jun/13   | 4.3          | mg/L            | N          |
| December 17, 2010                        | Ethylbenzene             | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Fludioxonil              | 26/Jun/13   | 0.01         | ug/L            | N          |
| December 17, 2010                        | Hardness                 | 26/Jun/13   | 334          | mg/L            | N          |
| December 17, 2010                        | Iron                     | 26/Jun/13   | 0.082        | mg/L            | N          |
| December 17, 2011                        | Iron                     | 26/Jun/13   | 0.082        | mg/L            | N          |
| December 17, 2010                        | Langelier's Index        | 26/Jun/13   | 0.816        | @25 C           | N          |
| December 17, 2010                        | Magnesium                | 26/Jun/13   | 21.1         | mg/L            | N          |
| December 17, 2010                        | Manganese                | 26/Jun/13   | 0.335        | mg/L            | N          |
| December 17, 2010                        | Nickel                   | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Total Kjeldahl Nitrogen  | 26/Jun/13   | 0.27         | mg/L            | N          |
| December 17, 2010                        | Organic Nitrogen         | 26/Jun/13   | 0.27         | mg/L            | N          |
| December 17, 2010                        | pH                       | 26/Jun/13   | 7.78         | mg/L            | N          |
| December 17, 2010                        | Potassium                | 26/Jun/13   | 2.2          | mg/L            | N          |
| December 17, 2010                        | Silica                   | 26/Jun/13   | 8.8          | mg/L            | N          |
| December 17, 2010                        | Silver                   | 26/Jun/13   | 0.00002      | mg/L            | N          |
| December 17, 2010                        | TDS(ion sum calc.)       | 26/Jun/13   | 384          | mg/L            | N          |
| December 17, 2010                        | Sulphate                 | 26/Jun/13   | 19           | mg/L            | N          |
| December 17, 2010                        | Sulphide                 | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Toluene                  | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Total Phosphorus         | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Turbidity                | 26/Jun/13   | 0.8          | NTU             | N          |
| December 17, 2010                        | Xylene (Total)           | 26/Jun/13   | 1.1          | ug/L            | N          |
| December 17, 2010                        | m/p-xylene               | 26/Jun/13   | 1            | ug/L            | N          |
| December 17, 2010                        | o-xylene                 | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Zinc                     | 26/Jun/13   | 0.005        | mg/L            | N          |



## SITE: Fanshawe Well #4 - Raw

### a) INORGANIC PARAMETERS (including lead, sodium, nitrate, nitrite, and fluoride)

| Date of Municipal Drinking Water Licence | Parameter                       | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|---------------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Antimony                        | 26/Jun/13   | 0.1          | ug/L            | N          |
| December 17, 2010                        | Arsenic                         | 26/Jun/13   | 0.2          | ug/L            | N          |
| December 17, 2010                        | Barium                          | 26/Jun/13   | 32           | ug/L            | N          |
| December 17, 2010                        | Boron                           | 26/Jun/13   | 18           | ug/L            | N          |
| December 17, 2010                        | Cadmium                         | 26/Jun/13   | 0.02         | ug/L            | N          |
| December 17, 2010                        | Chromium                        | 26/Jun/13   | 2 <MDL       | ug/L            | N          |
| December 17, 2010                        | Fluoride                        | 26/Jun/13   | 0.2          | mg/L            | N          |
| December 17, 2010                        | Mercury                         | 26/Jun/13   | 0.02 <MDL    | ug/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 5/Mar/13    | 0.3          | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 26/Jun/13   | 0.3          | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 16/Sep/13   | 0.2          | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 9/Dec/13    | 0.15         | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 5/Mar/13    | 0.3          | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 26/Jun/13   | 0.3          | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 16/Sep/13   | 0.2          | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 9/Dec/13    | 0.15         | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 5/Mar/13    | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 26/Jun/13   | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 16/Sep/13   | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 9/Dec/13    | 0.05 <RDL    | mg/L            | N          |
| December 17, 2010                        | Selenium                        | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Sodium*                         | 26/Jun/13   | 16           | mg/L            | N          |
| December 17, 2010                        | Uranium                         | 26/Jun/13   | 0.9          | ug/L            | N          |



## b) ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                                  | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alachlor                                   | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Aldicarb                                   | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Aldrin + Dieldrin                          | 26/Jun/13   | 0.02 <MDL    | ug/L            | N          |
| December 17, 2010                        | Atrazine + N-dealkylated metabolites       | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Azinphos-methyl                            | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Bendiocarb                                 | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Benzene                                    | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Benzo(a)pyrene                             | 26/Jun/13   | 0.005 <MDL   | ug/L            | N          |
| December 17, 2010                        | Bromoxynil                                 | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Carbaryl                                   | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Carbofuran                                 | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Carbon tetrachloride                       | 26/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Chlordane (Total)                          | 26/Jun/13   | 0.04 <MDL    | ug/L            | N          |
| December 17, 2010                        | Chlorpyrifos                               | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Cyanazine                                  | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Diazinon                                   | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Dicamba                                    | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichlorobenzene                        | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 1,4-Dichlorobenzene                        | 26/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dichlorodiphenyltrichloroethane (DDT) + Me | 26/Jun/13   | 0.01 <MDL    | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichloroethane                         | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 1,1-Dichloroethylene (vinylidene chloride) | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dichloromethane                            | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenol                         | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenoxyacetic acid (2,4-D)     | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Diclofop-methyl                            | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dimethoate                                 | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Dinoseb                                    | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Diquat                                     | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Diuron                                     | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Glyphosate                                 | 26/Jun/13   | 25 <MDL      | ug/L            | N          |
| December 17, 2010                        | Heptachlor + Heptachlor Epoxide            | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Lindane (Total)                            | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Malathion                                  | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Methoxychlor                               | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Metolachlor                                | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Metribuzin                                 | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Monochlorobenzene                          | 26/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Paraquat                                   | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Parathion                                  | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Pentachlorophenol                          | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Phorate                                    | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Picloram                                   | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Polychlorinated Biphenyls (PCBs)           | 26/Jun/13   | 0.05 <MDL    | ug/L            | N          |
| December 17, 2010                        | Prometryne                                 | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Simazine                                   | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |



|                   |   |           |          |      |   |
|-------------------|---|-----------|----------|------|---|
| December 17, 2010 | Temephos                                    | 26/Jun/13 | 10 <MDL  | ug/L | N |
| December 17, 2010 | Terbufos                                    | 26/Jun/13 | 0.3 <MDL | ug/L | N |
| December 17, 2010 | Tetrachloroethylene (perchloroethylene)     | 26/Jun/13 | 0.2 <MDL | ug/L | N |
| December 17, 2010 | 2,3,4,6-tetrachlorophenol                   | 26/Jun/13 | 0.1 <MDL | ug/L | N |
| December 17, 2010 | Triallate                                   | 26/Jun/13 | 10 <MDL  | ug/L | N |
| December 17, 2010 | Trichloroethylene                           | 26/Jun/13 | 0.1 <MDL | ug/L | N |
| December 17, 2010 | 2,4,6-trichlorophenol                       | 26/Jun/13 | 0.1 <MDL | ug/L | N |
| December 17, 2010 | 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) | 26/Jun/13 | 10 <MDL  | ug/L | N |
| December 17, 2010 | Trifluralin                                 | 26/Jun/13 | 0.5 <MDL | ug/L | N |
| December 17, 2010 | Vinyl Chloride                              | 26/Jun/13 | 0.2 <MDL | ug/L | N |





## c) NON-REGULATED INORGANIC/ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alkalinity               | 26/Jun/13   | 286          | mg/L            | N          |
| December 17, 2010                        | Aluminum                 | 26/Jun/13   | 0.03         | mg/L            | N          |
| December 17, 2010                        | Ammonia+Ammonium (N)     | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Azoxystrobin             | 26/Jun/13   | 0.02         | ug/L            | N          |
| December 17, 2010                        | Calcium                  | 26/Jun/13   | 87.8         | mg/L            | N          |
| December 17, 2010                        | Chloride                 | 26/Jun/13   | 22.3         | mg/L            | N          |
| December 17, 2010                        | Cobalt                   | 26/Jun/13   | 0.005        | mg/L            | N          |
| December 17, 2010                        | Conductivity             | 26/Jun/13   | 636          | uS/cm           | N          |
| December 17, 2010                        | Copper                   | 26/Jun/13   | 0.002        | mg/L            | N          |
| December 17, 2010                        | Cyanide                  | 26/Jun/13   | 0.005        | mg/L            | N          |
| December 17, 2010                        | Dissolved Organic Carbon | 26/Jun/13   | 3.5          | mg/L            | N          |
| December 17, 2010                        | Ethylbenzene             | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Fludioxonil              | 26/Jun/13   | 0.01         | ug/L            | N          |
| December 17, 2010                        | Hardness                 | 26/Jun/13   | 294          | mg/L            | N          |
| December 17, 2010                        | Iron                     | 26/Jun/13   | 0.067        | mg/L            | N          |
| December 17, 2010                        | Langelier's Index        | 26/Jun/13   | 0.808        | @25 C           | N          |
| December 17, 2010                        | Magnesium                | 26/Jun/13   | 18.2         | mg/L            | N          |
| December 17, 2010                        | Manganese                | 26/Jun/13   | 0.153        | mg/L            | N          |
| December 17, 2010                        | Nickel                   | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Organic Nitrogen         | 26/Jun/13   | 0.16         | mg/L            | N          |
| December 17, 2010                        | pH                       | 26/Jun/13   | 7.86         | mg/L            | N          |
| December 17, 2010                        | Potassium                | 26/Jun/13   | 1.7          | mg/L            | N          |
| December 17, 2010                        | Silica                   | 26/Jun/13   | 7.63         | mg/L            | N          |
| December 17, 2010                        | Silver                   | 26/Jun/13   | 0.00002      | mg/L            | N          |
| December 17, 2010                        | Sulphate                 | 26/Jun/13   | 17           | mg/L            | N          |
| December 17, 2010                        | Sulphide                 | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | TDS(ion sum calc.)       | 26/Jun/13   | 337          | mg/L            | N          |
| December 17, 2010                        | Total Kjeldahl Nitrogen  | 26/Jun/13   | 0.16         | mg/L            | N          |
| December 17, 2010                        | Toluene                  | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Total Phosphorus         | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Turbidity                | 26/Jun/13   | 1.1          | NTU             | N          |
| December 17, 2010                        | Xylene (Total)           | 26/Jun/13   | 1.1          | ug/L            | N          |
| December 17, 2010                        | m/p-xylene               | 26/Jun/13   | 1            | ug/L            | N          |
| December 17, 2010                        | o-xylene                 | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Zinc                     | 26/Jun/13   | 0.005        | mg/L            | N          |



## SITE: Fanshawe Well #5 - Raw

### a) INORGANIC PARAMETERS (including lead, sodium, nitrate, nitrite, and fluoride)

| Date of Municipal Drinking Water Licence | Parameter                       | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|---------------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Antimony                        | 26/Jun/13   | 0.1          | ug/L            | N          |
| December 17, 2010                        | Arsenic                         | 26/Jun/13   | 0.4          | ug/L            | N          |
| December 17, 2010                        | Barium                          | 26/Jun/13   | 49           | ug/L            | N          |
| December 17, 2010                        | Boron                           | 26/Jun/13   | 87           | ug/L            | N          |
| December 17, 2010                        | Cadmium                         | 26/Jun/13   | 0.020 <MDL   | ug/L            | N          |
| December 17, 2010                        | Chromium                        | 26/Jun/13   | 2 <MDL       | ug/L            | N          |
| December 17, 2010                        | Fluoride                        | 26/Jun/13   | 0.2          | mg/L            | N          |
| December 17, 2010                        | Mercury                         | 26/Jun/13   | 0.02 <MDL    | ug/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 5/Mar/13    | 1.9          | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 26/Jun/13   | 2            | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 16/Sep/13   | 1.5          | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 9/Dec/13    | 1.22         | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 5/Mar/13    | 1.9          | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 26/Jun/13   | 2            | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 16/Sep/13   | 1.5          | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 9/Dec/13    | 1.22         | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 5/Mar/13    | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 26/Jun/13   | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 16/Sep/13   | 0.1 <MDL     | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 9/Dec/13    | 0.05 <RDL    | mg/L            | N          |
| December 17, 2010                        | Selenium                        | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Sodium*                         | 26/Jun/13   | 69.3         | mg/L            | N          |
| December 17, 2010                        | Uranium                         | 26/Jun/13   | 0.61         | ug/L            | N          |



## b) ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                                  | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alachlor                                   | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Aldicarb                                   | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Aldrin + Dieldrin                          | 26/Jun/13   | 0.02 <MDL    | ug/L            | N          |
| December 17, 2010                        | Atrazine + N-dealkylated metabolites       | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Azinphos-methyl                            | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Bendiocarb                                 | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Benzene                                    | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Benzo(a)pyrene                             | 26/Jun/13   | 0.005 <MDL   | ug/L            | N          |
| December 17, 2010                        | Bromoxynil                                 | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Carbaryl                                   | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Carbofuran                                 | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Carbon tetrachloride                       | 26/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Chlordane (Total)                          | 26/Jun/13   | 0.04 <MDL    | ug/L            | N          |
| December 17, 2010                        | Chlorpyrifos                               | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Cyanazine                                  | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Diazinon                                   | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Dicamba                                    | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichlorobenzene                        | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 1,4-Dichlorobenzene                        | 26/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dichlorodiphenyltrichloroethane (DDT) + Me | 26/Jun/13   | 0.01 <MDL    | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichloroethane                         | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 1,1-Dichloroethylene (vinylidene chloride) | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dichloromethane                            | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenol                         | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenoxyacetic acid (2,4-D)     | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Diclofop-methyl                            | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dimethoate                                 | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Dinoseb                                    | 26/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Diquat                                     | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Diuron                                     | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Glyphosate                                 | 26/Jun/13   | 25 <MDL      | ug/L            | N          |
| December 17, 2010                        | Heptachlor + Heptachlor Epoxide            | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Lindane (Total)                            | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Malathion                                  | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Methoxychlor                               | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Metolachlor                                | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Metribuzin                                 | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Monochlorobenzene                          | 26/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Paraquat                                   | 26/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Parathion                                  | 26/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Pentachlorophenol                          | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Phorate                                    | 26/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Picloram                                   | 26/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Polychlorinated Biphenyls (PCBs)           | 26/Jun/13   | 0.05 <MDL    | ug/L            | N          |
| December 17, 2010                        | Prometryne                                 | 26/Jun/13   | 0.1 <MDL     | ug/L            | N          |



|                   |   |           |          |      |   |
|-------------------|---|-----------|----------|------|---|
| December 17, 2010 | Simazine                                    | 26/Jun/13 | 0.5 <MDL | ug/L | N |
| December 17, 2010 | Temephos                                    | 26/Jun/13 | 10 <MDL  | ug/L | N |
| December 17, 2010 | Terbufos                                    | 26/Jun/13 | 0.3 <MDL | ug/L | N |
| December 17, 2010 | Tetrachloroethylene (perchloroethylene)     | 26/Jun/13 | 0.2 <MDL | ug/L | N |
| December 17, 2010 | 2,3,4,6-tetrachlorophenol                   | 26/Jun/13 | 0.1 <MDL | ug/L | N |
| December 17, 2010 | Triallate                                   | 26/Jun/13 | 10 <MDL  | ug/L | N |
| December 17, 2010 | Trichloroethylene                           | 26/Jun/13 | 0.1 <MDL | ug/L | N |
| December 17, 2010 | 2,4,6-trichlorophenol                       | 26/Jun/13 | 0.1 <MDL | ug/L | N |
| December 17, 2010 | 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) | 26/Jun/13 | 10 <MDL  | ug/L | N |
| December 17, 2010 | Trifluralin                                 | 26/Jun/13 | 0.5 <MDL | ug/L | N |
| December 17, 2010 | Vinyl Chloride                              | 26/Jun/13 | 0.2 <MDL | ug/L | N |

## c) NON-REGULATED INORGANIC/ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alkalinity               | 26/Jun/13   | 335          | mg/L            | N          |
| December 17, 2010                        | Aluminum                 | 26/Jun/13   | 0.06         | mg/L            | N          |
| December 17, 2010                        | Ammonia+Ammonium (N)     | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Calcium                  | 26/Jun/13   | 123          | mg/L            | N          |
| December 17, 2010                        | Chloride                 | 26/Jun/13   | 128          | mg/L            | N          |
| December 17, 2010                        | Cobalt                   | 26/Jun/13   | 0.005        | mg/L            | N          |
| December 17, 2010                        | Conductivity             | 26/Jun/13   | 1110         | uS/cm           | N          |
| December 17, 2010                        | Copper                   | 26/Jun/13   | 0.003        | mg/L            | N          |
| December 17, 2010                        | Cyanide                  | 26/Jun/13   | 0.005        | mg/L            | N          |
| December 17, 2010                        | Dissolved Organic Carbon | 26/Jun/13   | 3.9          | mg/L            | N          |
| December 17, 2010                        | Ethylbenzene             | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Hardness                 | 26/Jun/13   | 401          | mg/L            | N          |
| December 17, 2010                        | Iron                     | 26/Jun/13   | 0.018        | mg/L            | N          |
| December 17, 2010                        | Langelier's Index        | 26/Jun/13   | 0.922        | @25 C           | N          |
| December 17, 2010                        | Magnesium                | 26/Jun/13   | 23.1         | mg/L            | N          |
| December 17, 2010                        | Manganese                | 26/Jun/13   | 0.001        | mg/L            | N          |
| December 17, 2010                        | Nickel                   | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Organic Nitrogen         | 26/Jun/13   | 0.23         | mg/L            | N          |
| December 17, 2010                        | pH                       | 26/Jun/13   | 7.78         | mg/L            | N          |
| December 17, 2010                        | Potassium                | 26/Jun/13   | 2.1          | mg/L            | N          |
| December 17, 2010                        | Silica                   | 26/Jun/13   | 8.68         | mg/L            | N          |
| December 17, 2010                        | Silver                   | 26/Jun/13   | 0.00002      | mg/L            | N          |
| December 17, 2010                        | Sulphate                 | 26/Jun/13   | 54           | mg/L            | N          |
| December 17, 2010                        | Sulphide                 | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | TDS(ion sum calc.)       | 26/Jun/13   | 609          | mg/L            | N          |
| December 17, 2010                        | Total Kjeldahl Nitrogen  | 26/Jun/13   | 0.23         | mg/L            | N          |
| December 17, 2010                        | Toluene                  | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Total Phosphorus         | 26/Jun/13   | 0.01         | mg/L            | N          |
| December 17, 2010                        | Turbidity                | 26/Jun/13   | 0.5          | NTU             | N          |
| December 17, 2010                        | Xylene (Total)           | 26/Jun/13   | 1.1          | ug/L            | N          |
| December 17, 2010                        | m/p-xylene               | 26/Jun/13   | 1            | ug/L            | N          |
| December 17, 2010                        | o-xylene                 | 26/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Zinc                     | 26/Jun/13   | 0.005        | mg/L            | N          |





## SITE: Fanshawe Well #6 - Raw

### a) INORGANIC PARAMETERS (including lead, sodium, nitrate, nitrite, and fluoride)

| Date of Municipal Drinking Water Licence | Parameter                       | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|---------------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Antimony                        | 26/Jun/13   | 0.100        | ug/L            | N          |
| December 17, 2010                        | Arsenic                         | 26/Jun/13   | 0.200        | ug/L            | N          |
| December 17, 2010                        | Barium                          | 26/Jun/13   | 24.000       | ug/L            | N          |
| December 17, 2010                        | Boron                           | 26/Jun/13   | 12.000       | ug/L            | N          |
| December 17, 2010                        | Cadmium                         | 26/Jun/13   | 0.020        | ug/L            | N          |
| December 17, 2010                        | Chromium                        | 26/Jun/13   | 2.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Fluoride                        | 26/Jun/13   | 0.200        | mg/L            | N          |
| December 17, 2010                        | Mercury                         | 26/Jun/13   | 0.020 <MDL   | ug/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 5/Mar/13    | 0.300        | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 26/Jun/13   | 0.400        | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 16/Sep/13   | 0.100 <MDL   | mg/L            | N          |
| December 17, 2010                        | Nitrate (as nitrogen)           | 9/Dec/13    | 0.050 <RDL   | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 5/Mar/13    | 0.300        | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 26/Jun/13   | 0.400        | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 16/Sep/13   | 0.100 <MDL   | mg/L            | N          |
| December 17, 2010                        | Nitrate + Nitrite (as nitrogen) | 9/Dec/13    | 0.070 <RDL   | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 5/Mar/13    | 0.100 <MDL   | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 26/Jun/13   | 0.100 <MDL   | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 16/Sep/13   | 0.100 <MDL   | mg/L            | N          |
| December 17, 2010                        | Nitrite (as nitrogen)           | 9/Dec/13    | 0.050 <RDL   | mg/L            | N          |
| December 17, 2010                        | Selenium                        | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Sodium*                         | 26/Jun/13   | 7.600        | mg/L            | N          |
| December 17, 2010                        | Uranium                         | 26/Jun/13   | 0.420        | ug/L            | N          |



## b) ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                                  | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alachlor                                   | 26/Jun/13   | 0.300 <MDL   | ug/L            | N          |
| December 17, 2010                        | Aldicarb                                   | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Aldrin + Dieldrin                          | 26/Jun/13   | 0.020 <MDL   | ug/L            | N          |
| December 17, 2010                        | Atrazine + N-dealkylated metabolites       | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Azinphos-methyl                            | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Bendiocarb                                 | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Benzene                                    | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Benzo(a)pyrene                             | 26/Jun/13   | 0.005 <MDL   | ug/L            | N          |
| December 17, 2010                        | Bromoxynil                                 | 26/Jun/13   | 0.300 <MDL   | ug/L            | N          |
| December 17, 2010                        | Carbaryl                                   | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Carbofuran                                 | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Carbon tetrachloride                       | 26/Jun/13   | 0.200 <MDL   | ug/L            | N          |
| December 17, 2010                        | Chlordane (Total)                          | 26/Jun/13   | 0.040 <MDL   | ug/L            | N          |
| December 17, 2010                        | Chlorpyrifos                               | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Cyanazine                                  | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Diazinon                                   | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dicamba                                    | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichlorobenzene                        | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | 1,4-Dichlorobenzene                        | 26/Jun/13   | 0.200 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dichlorodiphenyltrichloroethane (DDT) + Me | 26/Jun/13   | 0.010 <MDL   | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichloroethane                         | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | 1,1-Dichloroethylene (vinylidene chloride) | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dichloromethane                            | 26/Jun/13   | 0.300 <MDL   | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenol                         | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenoxyacetic acid (2,4-D)     | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Diclofop-methyl                            | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dimethoate                                 | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Dinoseb                                    | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |
| December 17, 2010                        | Diquat                                     | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Diuron                                     | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Glyphosate                                 | 26/Jun/13   | 25.0 <MDL    | ug/L            | N          |
| December 17, 2010                        | Heptachlor + Heptachlor Epoxide            | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Lindane (Total)                            | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Malathion                                  | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Methoxychlor                               | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Metolachlor                                | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Metribuzin                                 | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Monochlorobenzene                          | 26/Jun/13   | 0.200 <MDL   | ug/L            | N          |
| December 17, 2010                        | Paraquat                                   | 26/Jun/13   | 1.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Parathion                                  | 26/Jun/13   | 3.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Pentachlorophenol                          | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Phorate                                    | 26/Jun/13   | 0.300 <MDL   | ug/L            | N          |
| December 17, 2010                        | Picloram                                   | 26/Jun/13   | 5.000 <MDL   | ug/L            | N          |
| December 17, 2010                        | Polychlorinated Biphenyls (PCBs)           | 26/Jun/13   | 0.050 <MDL   | ug/L            | N          |
| December 17, 2010                        | Prometryne                                 | 26/Jun/13   | 0.100 <MDL   | ug/L            | N          |
| December 17, 2010                        | Simazine                                   | 26/Jun/13   | 0.500 <MDL   | ug/L            | N          |



|                   |   |           |            |      |   |
|-------------------|---|-----------|------------|------|---|
| December 17, 2010 | Temephos                                    | 26/Jun/13 | 10.0 <MDL  | ug/L | N |
| December 17, 2010 | Terbufos                                    | 26/Jun/13 | 0.300 <MDL | ug/L | N |
| December 17, 2010 | Tetrachloroethylene (perchloroethylene)     | 26/Jun/13 | 0.200 <MDL | ug/L | N |
| December 17, 2010 | 2,3,4,6-tetrachlorophenol                   | 26/Jun/13 | 0.100 <MDL | ug/L | N |
| December 17, 2010 | Triallate                                   | 26/Jun/13 | 10.0 <MDL  | ug/L | N |
| December 17, 2010 | Trichloroethylene                           | 26/Jun/13 | 0.100 <MDL | ug/L | N |
| December 17, 2010 | 2,4,6-trichlorophenol                       | 26/Jun/13 | 0.100 <MDL | ug/L | N |
| December 17, 2010 | 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) | 26/Jun/13 | 10.0 <MDL  | ug/L | N |
| December 17, 2010 | Trifluralin                                 | 26/Jun/13 | 0.500 <MDL | ug/L | N |
| December 17, 2010 | Vinyl Chloride                              | 26/Jun/13 | 0.200 <MDL | ug/L | N |



## c) NON-REGULATED INORGANIC/ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alkalinity               | 26/Jun/13   | 229.000      | mg/L            | N          |
| December 17, 2010                        | Aluminum                 | 26/Jun/13   | 0.030        | mg/L            | N          |
| December 17, 2010                        | Ammonia+Ammonium (N)     | 26/Jun/13   | 0.010        | mg/L            | N          |
| December 17, 2010                        | Azoxystrobin             | 26/Jun/13   | 0.020        | ug/L            | N          |
| December 17, 2010                        | Calcium                  | 26/Jun/13   | 72.000       | mg/L            | N          |
| December 17, 2010                        | Chloride                 | 26/Jun/13   | 12.000       | mg/L            | N          |
| December 17, 2010                        | Cobalt                   | 26/Jun/13   | 0.005        | mg/L            | N          |
| December 17, 2010                        | Conductivity             | 26/Jun/13   | 499.000      | uS/cm           | N          |
| December 17, 2010                        | Copper                   | 26/Jun/13   | 0.008        | mg/L            | N          |
| December 17, 2010                        | Cyanide                  | 26/Jun/13   | 0.005        | mg/L            | N          |
| December 17, 2010                        | Dissolved Organic Carbon | 26/Jun/13   | 2.900        | mg/L            | N          |
| December 17, 2010                        | Ethylbenzene             | 26/Jun/13   | 0.500        | ug/L            | N          |
| December 17, 2010                        | Fludioxonil              | 26/Jun/13   | 0.010        | ug/L            | N          |
| December 17, 2010                        | Hardness                 | 26/Jun/13   | 238.000      | mg/L            | N          |
| December 17, 2010                        | Iron                     | 26/Jun/13   | 0.005        | mg/L            | N          |
| December 17, 2010                        | Langelier's Index        | 26/Jun/13   | 0.665        | @25 C           | N          |
| December 17, 2010                        | Magnesium                | 26/Jun/13   | 14.100       | mg/L            | N          |
| December 17, 2010                        | Manganese                | 26/Jun/13   | 0.145        | mg/L            | N          |
| December 17, 2010                        | Nickel                   | 26/Jun/13   | 0.010        | mg/L            | N          |
| December 17, 2010                        | Organic Nitrogen         | 26/Jun/13   | 0.100        | mg/L            | N          |
| December 17, 2010                        | pH                       | 26/Jun/13   | 7.880        | mg/L            | N          |
| December 17, 2010                        | Potassium                | 26/Jun/13   | 2.000        | mg/L            | N          |
| December 17, 2010                        | Silica                   | 26/Jun/13   | 6.750        | mg/L            | N          |
| December 17, 2010                        | Silver                   | 26/Jun/13   | 0.000        | mg/L            | N          |
| December 17, 2010                        | Sulphate                 | 26/Jun/13   | 14.000       | mg/L            | N          |
| December 17, 2010                        | Sulphide                 | 26/Jun/13   | 0.010        | mg/L            | N          |
| December 17, 2010                        | TDS(ion sum calc.)       | 26/Jun/13   | 261.000      | mg/L            | N          |
| December 17, 2010                        | Total Kjeldahl Nitrogen  | 26/Jun/13   | 0.100        | mg/L            | N          |
| December 17, 2010                        | Toluene                  | 26/Jun/13   | 0.500        | ug/L            | N          |
| December 17, 2010                        | Total Phosphorus         | 26/Jun/13   | 0.010        | mg/L            | N          |
| December 17, 2010                        | Turbidity                | 26/Jun/13   | 0.300        | NTU             | N          |
| December 17, 2010                        | Xylene (Total)           | 26/Jun/13   | 1.100        | ug/L            | N          |
| December 17, 2010                        | m/p-xylene               | 26/Jun/13   | 1.000        | ug/L            | N          |
| December 17, 2010                        | o-xylene                 | 26/Jun/13   | 0.500        | ug/L            | N          |
| December 17, 2010                        | Zinc                     | 26/Jun/13   | 0.005        | mg/L            | N          |





Summary of Inorganic parameters tested during this reporting period or the most recent sample results.

As outlined below, sampling was carried out for inorganic and organic parameters at the following sites: Arva Pumping Station, Highbury Ave. at Dingman Dr.

## SITE: Arva Pumping Station - Treated Distribution

### a) INORGANIC PARAMETERS (including lead, sodium, nitrate, nitrite, and fluoride)

| Date of Municipal Drinking Water Licence | Parameter | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|-----------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Antimony  | 25/Jun/13   | 0.1          | ug/L            | N          |
| December 17, 2010                        | Arsenic   | 25/Jun/13   | 0.5          | ug/L            | N          |
| December 17, 2010                        | Barium    | 25/Jun/13   | 14           | ug/L            | N          |
| December 17, 2010                        | Boron     | 25/Jun/13   | 13           | ug/L            | N          |
| December 17, 2010                        | Cadmium   | 25/Jun/13   | 0.02 <MDL    | ug/L            | N          |
| December 17, 2010                        | Chromium  | 25/Jun/13   | 2 <MDL       | ug/L            | N          |
| December 17, 2010                        | Fluoride  | 2/Jan/13    | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 9/Jan/13    | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 16/Jan/13   | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 23/Jan/13   | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 30/Jan/13   | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 6/Feb/13    | 0.7          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 13/Feb/13   | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 20/Feb/13   | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 27/Feb/13   | 0.7          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 6/Mar/13    | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 13/Mar/13   | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 20/Mar/13   | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 27/Mar/13   | 0.7          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 3/Apr/13    | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 10/Apr/13   | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 17/Apr/13   | 0.7          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 24/Apr/13   | 0.7          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 1/May/13    | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 8/May/13    | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 15/May/13   | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 22/May/13   | 0.7          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 29/May/13   | 0.7          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 5/Jun/13    | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 12/Jun/13   | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 19/Jun/13   | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 26/Jun/13   | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 3/Jul/13    | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 17/Jul/13   | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 24/Jul/13   | 0.7          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 31/Jul/13   | 0.6          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 7/Aug/13    | 0.7          | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 14/Aug/13   | 0.6          | mg/L            | N          |



|                   |                                 |           |           |      |   |
|-------------------|---------------------------------|-----------|-----------|------|---|
| December 17, 2010 | Fluoride                        | 21/Aug/13 | 0.6       | mg/L | N |
| December 17, 2010 | Fluoride                        | 28/Aug/13 | 0.6       | mg/L | N |
| December 17, 2010 | Fluoride                        | 4/Sep/13  | 0.6       | mg/L | N |
| December 17, 2010 | Fluoride                        | 11/Sep/13 | 0.6       | mg/L | N |
| December 17, 2010 | Fluoride                        | 20/Sep/13 | 0.7       | mg/L | N |
| December 17, 2010 | Fluoride                        | 2/Oct/13  | 0.6       | mg/L | N |
| December 17, 2010 | Fluoride                        | 9/Oct/13  | 0.6       | mg/L | N |
| December 17, 2010 | Fluoride                        | 16/Oct/13 | 0.6       | mg/L | N |
| December 17, 2010 | Fluoride                        | 23/Oct/13 | 0.7       | mg/L | N |
| December 17, 2010 | Fluoride                        | 30/Oct/13 | 0.6       | mg/L | N |
| December 17, 2010 | Fluoride                        | 6/Nov/13  | 0.6       | mg/L | N |
| December 17, 2010 | Fluoride                        | 13/Nov/13 | 0.6       | mg/L | N |
| December 17, 2010 | Fluoride                        | 20/Nov/13 | 0.6       | mg/L | N |
| December 17, 2010 | Fluoride                        | 27/Nov/13 | 0.6       | mg/L | N |
| December 17, 2010 | Fluoride                        | 4/Dec/13  | 0.65      | mg/L | N |
| December 17, 2010 | Fluoride                        | 11/Dec/13 | 0.5       | mg/L | N |
| December 17, 2010 | Fluoride                        | 18/Dec/13 | 0.56      | mg/L | N |
| December 17, 2010 | Fluoride                        | 25/Dec/13 | 0.62      | mg/L | N |
| December 17, 2010 | Mercury                         | 25/Jun/13 | 0.02 <MDL | ug/L | N |
| December 17, 2010 | Nitrate (as nitrogen)           | 5/Mar/13  | 0.8       | mg/L | N |
| December 17, 2010 | Nitrate (as nitrogen)           | 25/Jun/13 | 0.4       | mg/L | N |
| December 17, 2010 | Nitrate (as nitrogen)           | 16/Sep/13 | 0.3       | mg/L | N |
| December 17, 2010 | Nitrate (as nitrogen)           | 2/Dec/13  | 0.3       | mg/L | N |
| December 17, 2010 | Nitrate (as nitrogen)           | 9/Dec/13  | 0.32      | mg/L | N |
| December 17, 2010 | Nitrate + Nitrite (as nitrogen) | 5/Mar/13  | 0.8       | mg/L | N |
| December 17, 2010 | Nitrate + Nitrite (as nitrogen) | 25/Jun/13 | 0.4       | mg/L | N |
| December 17, 2010 | Nitrate + Nitrite (as nitrogen) | 16/Sep/13 | 0.3       | mg/L | N |
| December 17, 2010 | Nitrate + Nitrite (as nitrogen) | 2/Dec/13  | 0.3       | mg/L | N |
| December 17, 2010 | Nitrate + Nitrite (as nitrogen) | 9/Dec/13  | 0.32      | mg/L | N |
| December 17, 2010 | Nitrite (as nitrogen)           | 5/Mar/13  | 0.1 <MDL  | mg/L | N |
| December 17, 2010 | Nitrite (as nitrogen)           | 25/Jun/13 | 0.1 <MDL  | mg/L | N |
| December 17, 2010 | Nitrite (as nitrogen)           | 16/Sep/13 | 0.1 <MDL  | mg/L | N |
| December 17, 2010 | Nitrite (as nitrogen)           | 2/Dec/13  | 0.1 <MDL  | mg/L | N |
| December 17, 2010 | Nitrite (as nitrogen)           | 9/Dec/13  | 0.05 <RDL | mg/L | N |
| December 17, 2010 | Selenium                        | 25/Jun/13 | 1 <MDL    | ug/L | N |
| December 17, 2010 | Sodium                          | 25/Jun/13 | 10.7      | mg/L | N |
| December 17, 2010 | Uranium                         | 25/Jun/13 | 0.05 <MDL | ug/L | N |



## b) ORGANIC PARAMETERS (including THM)

| Date of Municipal Drinking Water Licence | Parameter                                  | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alachlor                                   | 25/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Aldicarb                                   | 25/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Aldrin + Dieldrin                          | 25/Jun/13   | 0.02 <MDL    | ug/L            | N          |
| December 17, 2010                        | Atrazine + N-dealkylated metabolites       | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Azinphos-methyl                            | 25/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Bendiocarb                                 | 25/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Benzene                                    | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Benzo(a)pyrene                             | 25/Jun/13   | 0.01 <MDL    | ug/L            | N          |
| December 17, 2010                        | Bromoxynil                                 | 25/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Carbaryl                                   | 25/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Carbofuran                                 | 25/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Carbon tetrachloride                       | 25/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Chlordane (Total)                          | 25/Jun/13   | 0.04 <MDL    | ug/L            | N          |
| December 17, 2010                        | Chlorpyrifos                               | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Cyanazine                                  | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Diazinon                                   | 25/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Dicamba                                    | 25/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichlorobenzene                        | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 1,4-Dichlorobenzene                        | 25/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dichlorodiphenyltrichloroethane (DDT) + Me | 25/Jun/13   | 0.01 <MDL    | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichloroethane                         | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 1,1-Dichloroethylene (vinylidene chloride) | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dichloromethane                            | 25/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenol                         | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenoxyacetic acid (2,4-D)     | 25/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenoxyacetic acid (2,4-D)     | 2/Dec/13    | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Diclofop-methyl                            | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dimethoate                                 | 25/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Dinoseb                                    | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Diquat                                     | 25/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Diuron                                     | 25/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Glyphosate                                 | 25/Jun/13   | 25 <MDL      | ug/L            | N          |
| December 17, 2010                        | Heptachlor + Heptachlor Epoxide            | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Lindane (Total)                            | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Malathion                                  | 25/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Methoxychlor                               | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Metolachlor                                | 25/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Metribuzin                                 | 25/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Monochlorobenzene                          | 25/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Paraquat                                   | 25/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Parathion                                  | 25/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Pentachlorophenol                          | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Phorate                                    | 25/Jun/13   | 0.3 <MDL     | ug/L            | N          |



|                   |   |           |           |      |   |
|-------------------|---|-----------|-----------|------|---|
| December 17, 2010 | Picloram                                    | 25/Jun/13 | 5 <MDL    | ug/L | N |
| December 17, 2010 | Polychlorinated Biphenyls (PCBs)            | 25/Jun/13 | 0.05 <MDL | ug/L | N |
| December 17, 2010 | Prometryne                                  | 25/Jun/13 | 0.1 <MDL  | ug/L | N |
| December 17, 2010 | Simazine                                    | 25/Jun/13 | 0.5 <MDL  | ug/L | N |
| December 17, 2010 | Temephos                                    | 25/Jun/13 | 10 <MDL   | ug/L | N |
| December 17, 2010 | Terbufos                                    | 25/Jun/13 | 0.3 <MDL  | ug/L | N |
| December 17, 2010 | Tetrachloroethylene (perchloroethylene)     | 25/Jun/13 | 0.2 <MDL  | ug/L | N |
| December 17, 2010 | 2,3,4,6-tetrachlorophenol                   | 25/Jun/13 | 0.1 <MDL  | ug/L | N |
| December 17, 2010 | Triallate                                   | 25/Jun/13 | 10 <MDL   | ug/L | N |
| December 17, 2010 | Trichloroethylene                           | 25/Jun/13 | 0.1 <MDL  | ug/L | N |
| December 17, 2010 | 2,4,6-trichlorophenol                       | 25/Jun/13 | 0.1 <MDL  | ug/L | N |
| December 17, 2010 | 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) | 25/Jun/13 | 10 <MDL   | ug/L | N |
| December 17, 2010 | Trifluralin                                 | 25/Jun/13 | 0.5 <MDL  | ug/L | N |
| December 17, 2010 | Trihalomethanes (total)                     | 5/Mar/13  | 13.4      | ug/L | N |
| December 17, 2010 | Bromodichloromethane                        | 5/Mar/13  | 4.2       | ug/L | N |
| December 17, 2010 | Bromoform                                   | 5/Mar/13  | 0.1 <MDL  | ug/L | N |
| December 17, 2010 | Chloroform                                  | 5/Mar/13  | 8.1       | ug/L | N |
| December 17, 2010 | Dibromochloromethane                        | 5/Mar/13  | 1.1       | ug/L | N |
| December 17, 2010 | Trihalomethanes (total)                     | 25/Jun/13 | 22.7      | ug/L | N |
| December 17, 2010 | Bromodichloromethane                        | 25/Jun/13 | 6.6       | ug/L | N |
| December 17, 2010 | Bromoform                                   | 25/Jun/13 | 0.1 <MDL  | ug/L | N |
| December 17, 2010 | Chloroform                                  | 25/Jun/13 | 13.4      | ug/L | N |
| December 17, 2010 | Dibromochloromethane                        | 25/Jun/13 | 2.7       | ug/L | N |
| December 17, 2010 | Trihalomethanes (total)                     | 16/Sep/13 | 27.5      | ug/L | N |
| December 17, 2010 | Bromodichloromethane                        | 16/Sep/13 | 7.3       | ug/L | N |
| December 17, 2010 | Bromoform                                   | 16/Sep/13 | 0.4       | ug/L | N |
| December 17, 2010 | Chloroform                                  | 16/Sep/13 | 15.6      | ug/L | N |
| December 17, 2010 | Dibromochloromethane                        | 16/Sep/13 | 4.2       | ug/L | N |
| December 17, 2010 | Trihalomethanes (total)                     | 9/Dec/13  | 20        | µg/L | N |
| December 17, 2010 | Bromodichloromethane                        | 9/Dec/13  | 6         | µg/L | N |
| December 17, 2010 | Bromoform                                   | 9/Dec/13  | 0.3 <RDL  | µg/L | N |
| December 17, 2010 | Chloroform                                  | 9/Dec/13  | 10        | µg/L | N |
| December 17, 2010 | Dibromochloromethane                        | 9/Dec/13  | 3.5       | µg/L | N |
| December 17, 2010 | Vinyl Chloride                              | 25/Jun/13 | 0.2 <MDL  | ug/L | N |





## c) NON-REGULATED INORGANIC/ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alkalinity               | 25/Jun/13   | 78           | mg/L            | N          |
| December 17, 2010                        | Aluminum                 | 25/Jun/13   | 0.07         | mg/L            | N          |
| December 17, 2010                        | Ammonia+Ammonium (N)     | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Calcium                  | 25/Jun/13   | 25.6         | mg/L            | N          |
| December 17, 2010                        | Chloride                 | 25/Jun/13   | 8.3          | mg/L            | N          |
| December 17, 2010                        | Cobalt                   | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Conductivity             | 25/Jun/13   | 251          | uS/cm           | N          |
| December 17, 2010                        | Copper                   | 25/Jun/13   | 0.003        | mg/L            | N          |
| December 17, 2010                        | Copper                   | 2/Dec/13    | 0.003        | mg/L            | N          |
| December 17, 2010                        | Cyanide                  | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Dissolved Organic Carbon | 25/Jun/13   | 1.6          | mg/L            | N          |
| December 17, 2010                        | Ethylbenzene             | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Hardness                 | 25/Jun/13   | 95           | mg/L            | N          |
| December 17, 2010                        | Iron                     | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Iron                     | 2/Dec/13    | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Langelier's Index        | 25/Jun/13   | -0.152       | @25 C           | N          |
| December 17, 2010                        | m/p-xylene               | 25/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Magnesium                | 25/Jun/13   | 7.64         | mg/L            | N          |
| December 17, 2010                        | Manganese                | 25/Jun/13   | 0 <MDL       | mg/L            | N          |
| December 17, 2010                        | Nickel                   | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Organic Nitrogen         | 25/Jun/13   | 0.05 <MDL    | mg/L            | N          |
| December 17, 2010                        | o-xylene                 | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | pH                       | 25/Jun/13   | 7.93         | no unit         | N          |
| December 17, 2010                        | Potassium                | 25/Jun/13   | 0.8          | mg/L            | N          |
| December 17, 2010                        | Silica                   | 25/Jun/13   | 1.66         | mg/L            | N          |
| December 17, 2010                        | Silver                   | 25/Jun/13   | 0.00 <MDL    | mg/L            | N          |
| December 17, 2010                        | Sulphate                 | 25/Jun/13   | 29           | mg/L            | N          |
| December 17, 2010                        | Sulphide                 | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | TDS(ion sum calc.)       | 25/Jun/13   | 131          | mg/L            | N          |
| December 17, 2010                        | Toluene                  | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Total Kjeldahl Nitrogen  | 25/Jun/13   | 0.05 <MDL    | mg/L            | N          |
| December 17, 2010                        | Total Phosphorus         | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Turbidity                | 25/Jun/13   | 0.3          | NTU             | N          |
| December 17, 2010                        | Xylene (Total)           | 25/Jun/13   | 1.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Zinc                     | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |



**SITE: Highbury Ave. at Dingman Dr. - Treated Distribution**

**a) INORGANIC PARAMETERS (including lead, sodium, nitrate, nitrite, and fluoride)**

| Date of Municipal Drinking Water Licence | Parameter | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|-----------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Antimony  | 25/Jun/13   | 0.2          | ug/L            | N          |
| December 17, 2010                        | Arsenic   | 25/Jun/13   | 0.7          | ug/L            | N          |
| December 17, 2010                        | Barium    | 25/Jun/13   | 25           | ug/L            | N          |
| December 17, 2010                        | Boron     | 25/Jun/13   | 20           | ug/L            | N          |
| December 17, 2010                        | Cadmium   | 25/Jun/13   | 0.02 <MDL    | ug/L            | N          |
| December 17, 2010                        | Chromium  | 25/Jun/13   | 2 <MDL       | ug/L            | N          |
| December 17, 2010                        | Fluoride  | 2/Jan/13    | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 9/Jan/13    | 0.60         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 16/Jan/13   | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 23/Jan/13   | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 30/Jan/13   | 0.30         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 6/Feb/13    | 0.40         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 13/Feb/13   | 0.70         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 20/Feb/13   | 0.60         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 27/Feb/13   | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 6/Mar/13    | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 13/Mar/13   | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 20/Mar/13   | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 27/Mar/13   | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 3/Apr/13    | 0.60         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 10/Apr/13   | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 17/Apr/13   | 0.60         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 24/Apr/13   | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 1/May/13    | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 8/May/13    | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 15/May/13   | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 22/May/13   | 0.60         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 29/May/13   | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 5/Jun/13    | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 12/Jun/13   | 0.60         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 19/Jun/13   | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 26/Jun/13   | 0.50         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 3/Jul/13    | 0.60         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 10/Jul/13   | 0.60         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 17/Jul/13   | 0.60         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 24/Jul/13   | 0.60         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 31/Jul/13   | 0.60         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 7/Aug/13    | 0.60         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 14/Aug/13   | 0.60         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 21/Aug/13   | 0.60         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 28/Aug/13   | 0.70         | mg/L            | N          |
| December 17, 2010                        | Fluoride  | 4/Sep/13    | 0.60         | mg/L            | N          |



|                   |                                 |           |           |      |   |
|-------------------|---------------------------------|-----------|-----------|------|---|
| December 17, 2010 | Fluoride                        | 11/Sep/13 | 0.60      | mg/L | N |
| December 17, 2010 | Fluoride                        | 18/Sep/13 | 0.60      | mg/L | N |
| December 17, 2010 | Fluoride                        | 2/Oct/13  | 0.50      | mg/L | N |
| December 17, 2010 | Fluoride                        | 9/Oct/13  | 0.60      | mg/L | N |
| December 17, 2010 | Fluoride                        | 16/Oct/13 | 0.60      | mg/L | N |
| December 17, 2010 | Fluoride                        | 23/Oct/13 | 0.60      | mg/L | N |
| December 17, 2010 | Fluoride                        | 30/Oct/13 | 0.60      | mg/L | N |
| December 17, 2010 | Fluoride                        | 6/Nov/13  | 0.50      | mg/L | N |
| December 17, 2010 | Fluoride                        | 13/Nov/13 | 0.50      | mg/L | N |
| December 17, 2010 | Fluoride                        | 20/Nov/13 | 0.50      | mg/L | N |
| December 17, 2010 | Fluoride                        | 27/Nov/13 | 0.40      | mg/L | N |
| December 17, 2010 | Fluoride                        | 4/Dec/13  | 0.58      | mg/L | N |
| December 17, 2010 | Fluoride                        | 11/Dec/13 | 0.37      | mg/L | N |
| December 17, 2010 | Fluoride                        | 18/Dec/13 | 0.34      | mg/L | N |
| December 17, 2010 | Fluoride                        | 25/Dec/13 | 0.39      | mg/L | N |
| December 17, 2010 | Mercury                         | 25/Jun/13 | 0.02 <MDL | ug/L | N |
| December 17, 2010 | Nitrate (as nitrogen)           | 5/Mar/13  | 0.30      | mg/L | N |
| December 17, 2010 | Nitrate (as nitrogen)           | 25/Jun/13 | 0.20      | mg/L | N |
| December 17, 2010 | Nitrate (as nitrogen)           | 16/Sep/13 | 0.20      | mg/L | N |
| December 17, 2010 | Nitrate (as nitrogen)           | 9/Dec/13  | 0.19      | mg/L | N |
| December 17, 2010 | Nitrate + Nitrite (as nitrogen) | 5/Mar/13  | 0.30      | mg/L | N |
| December 17, 2010 | Nitrate + Nitrite (as nitrogen) | 25/Jun/13 | 0.20      | mg/L | N |
| December 17, 2010 | Nitrate + Nitrite (as nitrogen) | 16/Sep/13 | 0.20      | mg/L | N |
| December 17, 2010 | Nitrate + Nitrite (as nitrogen) | 9/Dec/13  | 0.19      | mg/L | N |
| December 17, 2010 | Nitrite (as nitrogen)           | 5/Mar/13  | 0.10 <MDL | mg/L | N |
| December 17, 2010 | Nitrite (as nitrogen)           | 25/Jun/13 | 0.10 <MDL | mg/L | N |
| December 17, 2010 | Nitrite (as nitrogen)           | 16/Sep/13 | 0.10 <MDL | mg/L | N |
| December 17, 2010 | Nitrite (as nitrogen)           | 9/Dec/13  | 0.05 <RDL | mg/L | N |
| December 17, 2010 | Selenium                        | 25/Jun/13 | 1 <MDL    | ug/L | N |
| December 17, 2010 | Sodium                          | 25/Jun/13 | 20.30     | mg/L | N |
| December 17, 2010 | Sodium                          | 3/Jul/13  | 20.20     | mg/L | Y |
| December 17, 2010 | Uranium                         | 25/Jun/13 | 0.05 <MDL | ug/L | N |



## b) ORGANIC PARAMETERS (including THM)

| Date of Municipal Drinking Water Licence | Parameter                                  | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alachlor                                   | 25/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Aldicarb                                   | 25/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Aldrin + Dieldrin                          | 25/Jun/13   | 0.02 <MDL    | ug/L            | N          |
| December 17, 2010                        | Atrazine + N-dealkylated metabolites       | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Azinphos-methyl                            | 25/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Bendiocarb                                 | 25/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Benzene                                    | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Benzo(a)pyrene                             | 25/Jun/13   | 0.01 <MDL    | ug/L            | N          |
| December 17, 2010                        | Bromoxynil                                 | 25/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Carbaryl                                   | 25/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Carbofuran                                 | 25/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Carbon tetrachloride                       | 25/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Chlordane (Total)                          | 25/Jun/13   | 0.04 <MDL    | ug/L            | N          |
| December 17, 2010                        | Chlorpyrifos                               | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Cyanazine                                  | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Diazinon                                   | 25/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Dicamba                                    | 25/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichlorobenzene                        | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 1,4-Dichlorobenzene                        | 25/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dichlorodiphenyltrichloroethane (DDT) + Me | 25/Jun/13   | 0.01 <MDL    | ug/L            | N          |
| December 17, 2010                        | 1,2-Dichloroethane                         | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 1,1-Dichloroethylene (vinylidene chloride) | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dichloromethane                            | 25/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenol                         | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | 2,4-dichlorophenoxyacetic acid (2,4-D)     | 25/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Diclofop-methyl                            | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Dimethoate                                 | 25/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Dinoseb                                    | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Diquat                                     | 25/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Diuron                                     | 25/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Glyphosate                                 | 25/Jun/13   | 25 <MDL      | ug/L            | N          |
| December 17, 2010                        | Heptachlor + Heptachlor Epoxide            | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Lindane (Total)                            | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Malathion                                  | 25/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Methoxychlor                               | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Metolachlor                                | 25/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Metribuzin                                 | 25/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Monochlorobenzene                          | 25/Jun/13   | 0.2 <MDL     | ug/L            | N          |
| December 17, 2010                        | Paraquat                                   | 25/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Parathion                                  | 25/Jun/13   | 3 <MDL       | ug/L            | N          |
| December 17, 2010                        | Pentachlorophenol                          | 25/Jun/13   | 0.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Phorate                                    | 25/Jun/13   | 0.3 <MDL     | ug/L            | N          |
| December 17, 2010                        | Picloram                                   | 25/Jun/13   | 5 <MDL       | ug/L            | N          |
| December 17, 2010                        | Polychlorinated Biphenyls (PCBs)           | 25/Jun/13   | 0.05 <MDL    | ug/L            | N          |





|                   |   |           |           |      |   |
|-------------------|---|-----------|-----------|------|---|
| December 17, 2010 | Prometryne                                  | 25/Jun/13 | 0.1 <MDL  | ug/L | N |
| December 17, 2010 | Simazine                                    | 25/Jun/13 | 0.5 <MDL  | ug/L | N |
| December 17, 2010 | Temephos                                    | 25/Jun/13 | 10 <MDL   | ug/L | N |
| December 17, 2010 | Terbufos                                    | 25/Jun/13 | 0.3 <MDL  | ug/L | N |
| December 17, 2010 | Tetrachloroethylene (perchloroethylene)     | 25/Jun/13 | 0.2 <MDL  | ug/L | N |
| December 17, 2010 | 2,3,4,6-tetrachlorophenol                   | 25/Jun/13 | 0.1 <MDL  | ug/L | N |
| December 17, 2010 | Triallate                                   | 25/Jun/13 | 10 <MDL   | ug/L | N |
| December 17, 2010 | Trichloroethylene                           | 25/Jun/13 | 0.1 <MDL  | ug/L | N |
| December 17, 2010 | 2,4,6-trichlorophenol                       | 25/Jun/13 | 0.1 <MDL  | ug/L | N |
| December 17, 2010 | 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) | 25/Jun/13 | 10 <MDL   | ug/L | N |
| December 17, 2010 | Trifluralin                                 | 25/Jun/13 | 0.5 <MDL  | ug/L | N |
| December 17, 2010 | Trihalomethanes (total)                     | 5/Mar/13  | 16.50     | ug/L | N |
| December 17, 2010 | Bromodichloromethane                        | 5/Mar/13  | 5.40      | ug/L | N |
| December 17, 2010 | Bromoform                                   | 5/Mar/13  | 0.10 <MDL | ug/L | N |
| December 17, 2010 | Chloroform                                  | 5/Mar/13  | 9.10      | ug/L | N |
| December 17, 2010 | Dibromochloromethane                        | 5/Mar/13  | 2.10      | ug/L | N |
| December 17, 2010 | Trihalomethanes (total)                     | 25/Jun/13 | 37.10     | ug/L | N |
| December 17, 2010 | Bromodichloromethane                        | 25/Jun/13 | 10.00     | ug/L | N |
| December 17, 2010 | Bromoform                                   | 25/Jun/13 | 0.10 <MDL | ug/L | N |
| December 17, 2010 | Chloroform                                  | 25/Jun/13 | 23.20     | ug/L | N |
| December 17, 2010 | Dibromochloromethane                        | 25/Jun/13 | 3.90      | ug/L | N |
| December 17, 2010 | Trihalomethanes (total)                     | 16/Sep/13 | 35.80     | ug/L | N |
| December 17, 2010 | Bromodichloromethane                        | 16/Sep/13 | 10.10     | ug/L | N |
| December 17, 2010 | Bromoform                                   | 16/Sep/13 | 0.30      | ug/L | N |
| December 17, 2010 | Chloroform                                  | 16/Sep/13 | 21.60     | ug/L | N |
| December 17, 2010 | Dibromochloromethane                        | 16/Sep/13 | 3.90      | ug/L | N |
| December 17, 2010 | Trihalomethanes (total)                     | 9/Dec/13  | 24.00     | µg/L | N |
| December 17, 2010 | Bromodichloromethane                        | 9/Dec/13  | 7.60      | µg/L | N |
| December 17, 2010 | Bromoform                                   | 9/Dec/13  | 0.30 <RDL | µg/L | N |
| December 17, 2010 | Chloroform                                  | 9/Dec/13  | 12.00     | µg/L | N |
| December 17, 2010 | Dibromochloromethane                        | 9/Dec/13  | 4.40      | µg/L | N |
| December 17, 2010 | Vinyl Chloride                              | 25/Jun/13 | 0.2 <MDL  | ug/L | N |



## c) NON-REGULATED INORGANIC/ORGANIC PARAMETERS

| Date of Municipal Drinking Water Licence | Parameter                | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|--------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Alkalinity               | 25/Jun/13   | 103          | mg/L            | N          |
| December 17, 2010                        | Aluminum                 | 25/Jun/13   | 0.04         | mg/L            | N          |
| December 17, 2010                        | Ammonia+Ammonium (N)     | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Calcium                  | 25/Jun/13   | 33.7         | mg/L            | N          |
| December 17, 2010                        | Chloride                 | 25/Jun/13   | 16.8         | mg/L            | N          |
| December 17, 2010                        | Cobalt                   | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Conductivity             | 25/Jun/13   | 341          | uS/cm           | N          |
| December 17, 2010                        | Copper                   | 25/Jun/13   | 0            | mg/L            | N          |
| December 17, 2010                        | Cyanide                  | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Dissolved Organic Carbon | 25/Jun/13   | 2.3          | mg/L            | N          |
| December 17, 2010                        | Ethylbenzene             | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Hardness                 | 25/Jun/13   | 119          | mg/L            | N          |
| December 17, 2010                        | Iron                     | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Langelier's Index        | 25/Jun/13   | 0.09         | @25 C           | N          |
| December 17, 2010                        | m/p-xylene               | 25/Jun/13   | 1 <MDL       | ug/L            | N          |
| December 17, 2010                        | Magnesium                | 25/Jun/13   | 8.57         | mg/L            | N          |
| December 17, 2010                        | Manganese                | 25/Jun/13   | 0.001 <MDL   | mg/L            | N          |
| December 17, 2010                        | Nickel                   | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Organic Nitrogen         | 25/Jun/13   | 0.05 <MDL    | mg/L            | N          |
| December 17, 2010                        | o-xylene                 | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | pH                       | 25/Jun/13   | 7.96         | no unit         | N          |
| December 17, 2010                        | Potassium                | 25/Jun/13   | 1.3          | mg/L            | N          |
| December 17, 2010                        | Silica                   | 25/Jun/13   | 0.73         | mg/L            | N          |
| December 17, 2010                        | Silver                   | 25/Jun/13   | 0.000 <MDL   | mg/L            | N          |
| December 17, 2010                        | Sulphate                 | 25/Jun/13   | 37           | mg/L            | N          |
| December 17, 2010                        | Sulphide                 | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | TDS(ion sum calc.)       | 25/Jun/13   | 180          | mg/L            | N          |
| December 17, 2010                        | Toluene                  | 25/Jun/13   | 0.5 <MDL     | ug/L            | N          |
| December 17, 2010                        | Total Kjeldahl Nitrogen  | 25/Jun/13   | 0.05 <MDL    | mg/L            | N          |
| December 17, 2010                        | Total Phosphorus         | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |
| December 17, 2010                        | Turbidity                | 25/Jun/13   | 0.3          | NTU             | N          |
| December 17, 2010                        | Xylene (Total)           | 25/Jun/13   | 1.1 <MDL     | ug/L            | N          |
| December 17, 2010                        | Zinc                     | 25/Jun/13   | 0.01 <MDL    | mg/L            | N          |



Summary of Inorganic/Organic parameters tested during this reporting period.

As outlined below, sampling was carried out for THM's at 214 Rathowan St., 4318 Colonel Talbot Rd., and at 869 Commissioners Road West.

## SITE: Fire Hydrant at 214 Rathowan St. - Treated Distribution

### b) ORGANIC PARAMETERS (THM)

| Date of Municipal Drinking Water Licence | Parameter               | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|-------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Trihalomethanes (total) | 5/Mar/13    | 15.60        | ug/L            | N          |
| December 17, 2010                        | (bromodichloromethane)  | 5/Mar/13    | 4.80         | ug/L            | N          |
| December 17, 2010                        | (bromoform)             | 5/Mar/13    | 0.10 <MDL    | ug/L            | N          |
| December 17, 2010                        | (chloroform)            | 5/Mar/13    | 0.00         | ug/L            | N          |
| December 17, 2010                        | (dibromochloromethane)  | 5/Mar/13    | 1.50         | ug/L            | N          |
| December 17, 2010                        | Trihalomethanes (total) | 24/Jun/13   | 34.00        | ug/L            | N          |
| December 17, 2010                        | (bromodichloromethane)  | 24/Jun/13   | 8.90         | ug/L            | N          |
| December 17, 2010                        | (bromoform)             | 24/Jun/13   | 0.10 <MDL    | ug/L            | N          |
| December 17, 2010                        | (chloroform)            | 24/Jun/13   | 21.70        | ug/L            | N          |
| December 17, 2010                        | (dibromochloromethane)  | 24/Jun/13   | 3.40         | ug/L            | N          |
| December 17, 2010                        | Trihalomethanes (total) | 16/Sep/13   | 36.60        | ug/L            | N          |
| December 17, 2010                        | (bromodichloromethane)  | 16/Sep/13   | 9.20         | ug/L            | N          |
| December 17, 2010                        | (bromoform)             | 16/Sep/13   | 0.40         | ug/L            | N          |
| December 17, 2010                        | (chloroform)            | 16/Sep/13   | 22.30        | ug/L            | N          |
| December 17, 2010                        | (dibromochloromethane)  | 16/Sep/13   | 4.70         | ug/L            | N          |
| December 17, 2010                        | Trihalomethanes (total) | 9/Dec/13    | 29.00        | µg/L            | N          |
| December 17, 2010                        | (bromodichloromethane)  | 9/Dec/13    | 8.60         | µg/L            | N          |
| December 17, 2010                        | (bromoform)             | 9/Dec/13    | 0.30 <RDL    | µg/L            | N          |
| December 17, 2010                        | (chloroform)            | 9/Dec/13    | 16.00        | µg/L            | N          |
| December 17, 2010                        | (dibromochloromethane)  | 9/Dec/13    | 4.10         | µg/L            | N          |



## SITE: 4318 Colonel Talbot Rd. - Treated Distribution

### b) ORGANIC PARAMETERS (THM)

| Date of Municipal Drinking Water Licence | Parameter               | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|-------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Trihalomethanes (total) | 5/Mar/13    | 25.40        | ug/L            | N          |
| December 17, 2010                        | (bromodichloromethane)  | 5/Mar/13    | 7.40         | ug/L            | N          |
| December 17, 2010                        | (bromoform)             | 5/Mar/13    | 0.10 <MDL    | ug/L            | N          |
| December 17, 2010                        | (chloroform)            | 5/Mar/13    | 15.40        | ug/L            | N          |
| December 17, 2010                        | (dibromochloromethane)  | 5/Mar/13    | 2.60         | ug/L            | N          |
| December 17, 2010                        | Trihalomethanes (total) | 24/Jun/13   | 42.00        | ug/L            | N          |
| December 17, 2010                        | (bromodichloromethane)  | 24/Jun/13   | 10.00        | ug/L            | N          |
| December 17, 2010                        | (bromoform)             | 24/Jun/13   | 0.10 <MDL    | ug/L            | N          |
| December 17, 2010                        | (chloroform)            | 24/Jun/13   | 28.40        | ug/L            | N          |
| December 17, 2010                        | (dibromochloromethane)  | 24/Jun/13   | 3.60         | ug/L            | N          |
| December 17, 2010                        | Trihalomethanes (total) | 16/Sep/13   | 49.30        | ug/L            | N          |
| December 17, 2010                        | (bromodichloromethane)  | 16/Sep/13   | 11.40        | ug/L            | N          |
| December 17, 2010                        | (bromoform)             | 16/Sep/13   | 0.40         | ug/L            | N          |
| December 17, 2010                        | (chloroform)            | 16/Sep/13   | 32.40        | ug/L            | N          |
| December 17, 2010                        | (dibromochloromethane)  | 16/Sep/13   | 5.10         | ug/L            | N          |
| December 17, 2010                        | Trihalomethanes (total) | 9/Dec/13    | 51.00        | ug/L            | N          |
| December 17, 2010                        | (bromodichloromethane)  | 9/Dec/13    | 14.00        | ug/L            | N          |
| December 17, 2010                        | (bromoform)             | 9/Dec/13    | 0.30 <RDL    | ug/L            | N          |
| December 17, 2010                        | (chloroform)            | 9/Dec/13    | 31.00        | ug/L            | N          |
| December 17, 2010                        | (dibromochloromethane)  | 9/Dec/13    | 5.80         | ug/L            | N          |

## SITE: 869 Commissioners Rd W (#2 Reservoir) - Treated Distribution

### b) ORGANIC PARAMETERS (THM)

| Date of Municipal Drinking Water Licence | Parameter               | Sample Date | Result Value | Unit of Measure | Exceedance |
|--|-------------------------|-------------|--------------|-----------------|------------|
| December 17, 2010                        | Trihalomethanes (total) | 17/Apr/13   | 34.90        | ug/L            | N          |
| December 17, 2010                        | (bromodichloromethane)  | 17/Apr/13   | 8.20         | ug/L            | N          |
| December 17, 2010                        | (bromoform)             | 17/Apr/13   | 0.10 <MDL    | ug/L            | N          |
| December 17, 2010                        | (chloroform)            | 17/Apr/13   | 23.80        | ug/L            | N          |
| December 17, 2010                        | (dibromochloromethane)  | 17/Apr/13   | 3.00         | ug/L            | N          |

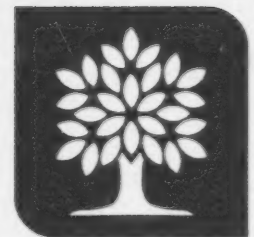




**List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.**

No instances of Half MAC exceedance during quarterly, annual and routine grab sample testing in 2013.

**Appendix 'B'**  
**2013 Annual Report**  
**(Elgin Middlesex Pumping Station –**  
**London Distribution System)**



**London**  
CANADA



|                                 |  |
|---------------------------------|--|
| Drinking-Water System Number:   | 260004917  |
| Drinking-Water System Name:     | Elgin Middlesex Pumping Station – City of London Distribution System |
| Drinking-Water System Owner:    | City of London   |
| Drinking-Water System Category: | Large Municipal Residential  |
| Period being reported:          | January 1, 2013 through December 31, 2013                            |

**Complete if your Category is Large Municipal Residential or Small Municipal Residential**

Does your Drinking-Water System serve more than 10,000 people? Yes ☒ No ☐

Is your annual report available to the public at no charge on a web site on the Internet? Yes ☒ No ☐

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

City of London  
300 Dufferin Ave  
London, ON  
N6B 1Z2  
[www.london.ca](http://www.london.ca)

Elgin Area Water Treatment Plant  
43665 Dexter Line, Union, ON

**Complete for all other Categories.**

Number of Designated Facilities served:

N/A

Did you provide a copy of your annual report to all Designated Facilities you serve? Yes ☐ No ☐

Number of Interested Authorities you report to:

N/A

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes ☐ No ☐

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Systems that receive their drinking water directly from the London EMPS:

| Drinking Water System Name         | Drinking Water System Number |
|------------------------------------|------------------------------|
| City of London Distribution System | 260004917                    |

Systems that receive their drinking water indirectly from the London EMPS:

| Drinking Water System Name    | Drinking Water System Number |
|-------------------------------|------------------------------|
| Municipality of Central Elgin | 260004761                    |



Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes ☒ No ☐

Indicate how you notified system users that your annual report is available, and is free of charge.

- ☒ Public access/notice via the web  
☒ Public access/notice via Government Office  
☐ Public access/notice via a newspaper  
☒ Public access/notice via Public Request  
☐ Public access/notice via a Public Library  
☐ Public access/notice via other method \_\_\_\_\_

**Describe your Drinking-Water System**

The Elgin Middlesex Pumping Station (EMPS) receives water from the Elgin Area Primary Water Supply System, which is located to the east of Port Stanley. Through various secondary water supply systems, the EMPS serves the Cities of London and St. Thomas, Town of Aylmer, and Municipalities of Central Elgin, Malahide and Southwold.

The EMPS is a shared facility encompassing a twin celled reservoir with a total capacity of 54,600m<sup>3</sup>. Booster pumps are dedicated to directing water to the City of London, St. Thomas Secondary and/or Aylmer Secondary Water Supply Systems. The EMPS houses a surge facility to service the London transmission main.

Three pipelines exit the EMPS: one pipeline runs North along Highbury Avenue, servicing the London Distribution system; the second exits to the south of the EMPS property and extends West to service the St. Area Thomas Secondary System; the third exits to the South, to Highway 3 and then runs in an Easterly direction to service the municipalities on the Aylmer Area Secondary System.

**List all water treatment chemicals used over this reporting period**

No re-treatment of water destined for London took place at the EMPS in 2013.

**Were any significant expenses incurred to?**

- ☐ Install required equipment  
☒ Repair required equipment  
☐ Replace required equipment

**Please provide a brief description and a breakdown of monetary expenses incurred**

- Repairs and rebuilding of surge system air compressor
- Rebuilding of discharge control valve for London pump #6





Notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

| Incident Date | Parameter | Result | Unit of Measure | Corrective Action | Corrective Action Date |
|---------------|-----------|--------|-----------------|-------------------|------------------------|
| N/A           | N/A       | N/A    | N/A             | N/A               | N/A                    |

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

|              | Number of Samples | Range of E.Coli Results (CFU/100 mL) (min #)-(max #) | Range of Total Coliform Results (CFU/100 mL) (min #)-(max #) | Number of Heterotrophic Plate Count (HPC) Samples | Range of HPC Results (CFU/1 mL) (min #)-(max #) |
|--------------|-------------------|--|--|---|---|
| Distribution | 53                | 0 - 0  | 0 - 0  | 53  | (<10) – (480)                                   |

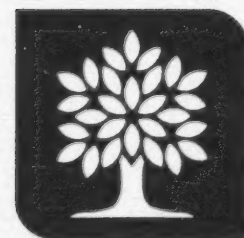
Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

| Analyte                       | Number of Grab Samples (Continuous Monitoring) | Min  | Max  | Avg  |
|-------------------------------|--|------|------|------|
| Free Chlorine Residual (mg/L) | 8760   | 0.56 | 1.31 | 0.87 |

Summary of Organic parameters sampled during this reporting period or the most recent sample results

| Parameter   | Sample Date   | Result Value         | Unit of Measure              | Exceedance |
|---|---|----------------------|------------------------------|------------|
| THM<br>(NOTE: result value is based on latest annual average) | January 17, 2013<br>April 15, 2013<br>July 15, 2013<br>October 12, 2013 | 13<br>16<br>31<br>36 | µg/L<br>µg/L<br>µg/L<br>µg/L | NO         |

**Appendix 'C'**  
**2013 Summary Report**  
*(Summary of Water Pumpage)*



**London**  
CANADA

| DAY                          | DATE      | ELGIN PUMPAGE<br>(m3) | ARVA PUMPAGE<br>(m3) | TOTAL LONDON<br>CONSUMPTION (m3) |
|------------------------------|-----------|-----------------------|----------------------|----------------------------------|
| Rated Capacity               | -         | 95,800 m3 / day       | 318,000 m3 / day     | 413,800 m3 / day                 |
| Tuesday                      | 1/Jan/13  | 22,844                | 97,304               | 110,578                          |
| Wednesday                    | 2/Jan/13  | 22,838                | 96,898               | 121,540                          |
| Thursday                     | 3/Jan/13  | 22,843                | 100,575              | 120,035                          |
| Friday                       | 4/Jan/13  | 22,839                | 96,283               | 116,642                          |
| Saturday                     | 5/Jan/13  | 22,846                | 88,465               | 116,723                          |
| Sunday                       | 6/Jan/13  | 22,843                | 96,630               | 123,306                          |
| Monday                       | 7/Jan/13  | 22,846                | 114,402              | 120,788                          |
| Tuesday                      | 8/Jan/13  | 22,845                | 96,274               | 111,903                          |
| Wednesday                    | 9/Jan/13  | <b>55,704</b>         | 47,382               | 109,174                          |
| Thursday                     | 10/Jan/13 | 51,469                | 86,273               | <b>143,830</b>                   |
| Friday                       | 11/Jan/13 | 22,843                | 84,328               | 114,387                          |
| Saturday                     | 12/Jan/13 | 22,842                | 87,939               | 119,123                          |
| Sunday                       | 13/Jan/13 | 22,845                | 110,853              | 123,552                          |
| Monday                       | 14/Jan/13 | 22,763                | 96,285               | 125,587                          |
| Tuesday                      | 15/Jan/13 | 22,763                | 107,441              | 123,439                          |
| Wednesday                    | 16/Jan/13 | 22,842                | 100,426              | 121,690                          |
| Thursday                     | 17/Jan/13 | 22,838                | 99,809               | 121,294                          |
| Friday                       | 18/Jan/13 | 22,840                | 96,081               | 113,960                          |
| Saturday                     | 19/Jan/13 | 22,842                | 91,371               | 116,017                          |
| Sunday                       | 20/Jan/13 | 22,838                | 100,825              | 127,046                          |
| Monday                       | 21/Jan/13 | 22,841                | 101,778              | 122,364                          |
| Tuesday                      | 22/Jan/13 | 22,840                | 101,048              | 123,888                          |
| Wednesday                    | 23/Jan/13 | 22,769                | 101,361              | 122,777                          |
| Thursday                     | 24/Jan/13 | 22,843                | 101,004              | 121,818                          |
| Friday                       | 25/Jan/13 | 22,839                | 96,958               | 117,542                          |
| Saturday                     | 26/Jan/13 | 22,843                | 88,677               | 121,666                          |
| Sunday                       | 27/Jan/13 | 22,842                | 101,627              | 124,920                          |
| Monday                       | 28/Jan/13 | 22,840                | 104,522              | 121,500                          |
| Tuesday                      | 29/Jan/13 | 22,841                | 97,055               | 131,621                          |
| Wednesday                    | 30/Jan/13 | 22                    | <b>120,083</b>       | 121,464                          |
| Thursday                     | 31/Jan/13 | 5,924                 | 119,538              | 122,299                          |
| January 2013 Monthly Max     |           | 55,704                | 120,083              | 143,830                          |
| January 2013 Monthly Average |           | 23,559                | 97,740               | 121,397                          |
| January 2013 Total           |           | 706,773               | 2,932,191            | 3,641,895                        |

| DAY                       | DATE      | ELGIN PUMPAGE<br>(m3) | ARVA PUMPAGE<br>(m3) | TOTAL LONDON<br>CONSUMPTION (m3) |
|---------------------------|-----------|-----------------------|----------------------|----------------------------------|
| Rated Capacity            | -         | 95,800 m3 / day       | 318,000 m3 / day     | 413,800 m3 / day                 |
| Friday                    | 1/Feb/13  | 22,852                | 103,963              | 123,433                          |
| Saturday                  | 2/Feb/13  | 22,846                | 100,824              | 121,991                          |
| Sunday                    | 3/Feb/13  | 22,846                | 108,484              | 127,597                          |
| Monday                    | 4/Feb/13  | 22,842                | 104,567              | 121,321                          |
| Tuesday                   | 5/Feb/13  | 22,842                | 96,503               | 121,149                          |
| Wednesday                 | 6/Feb/13  | 22,839                | 97,464               | 125,038                          |
| Thursday                  | 7/Feb/13  | 22,831                | 100,790              | 121,141                          |
| Friday                    | 8/Feb/13  | 22,840                | 89,329               | 116,904                          |
| Saturday                  | 9/Feb/13  | 22,835                | 100,613              | 118,938                          |
| Sunday                    | 10/Feb/13 | 22,840                | 104,078              | 124,213                          |
| Monday                    | 11/Feb/13 | 22,835                | 88,417               | 117,791                          |
| Tuesday                   | 12/Feb/13 | 22,830                | 103,523              | 120,265                          |
| Wednesday                 | 13/Feb/13 | 22,832                | 95,952               | 121,264                          |
| Thursday                  | 14/Feb/13 | 22,837                | 87,561               | 118,290                          |
| Friday                    | 15/Feb/13 | 22,833                | 92,145               | 112,723                          |
| Saturday                  | 16/Feb/13 | 22,839                | 91,483               | 114,096                          |
| Sunday                    | 17/Feb/13 | 22,841                | 90,935               | 109,492                          |
| Monday                    | 18/Feb/13 | 22,834                | 97,050               | 118,531                          |
| Tuesday                   | 19/Feb/13 | 22,829                | 97,460               | 117,133                          |
| Wednesday                 | 20/Feb/13 | 22,832                | 89,089               | 118,460                          |
| Thursday                  | 21/Feb/13 | 22,832                | 93,324               | 118,410                          |
| Friday                    | 22/Feb/13 | 22,824                | 92,653               | 112,546                          |
| Saturday                  | 23/Feb/13 | 22,822                | 92,973               | 114,442                          |
| Sunday                    | 24/Feb/13 | 22,834                | 97,879               | 121,841                          |
| Monday                    | 25/Feb/13 | 22,825                | 100,793              | 120,461                          |
| Tuesday                   | 26/Feb/13 | 22,821                | 97,004               | 120,276                          |
| Wednesday                 | 27/Feb/13 | 22,833                | 93,312               | 120,429                          |
| Thursday                  | 28/Feb/13 | 22,828                | 97,144               | 119,747                          |
| February 2013 Monthly Max |           | 22,852                | 108,484              | 127,597                          |
| February 2013 Monthly Max |           | 22,835                | 96,618               | 119,212                          |
| February 2013 Total       |           | 639,374               | 2,705,312            | 3,337,922                        |



| DAY                        | DATE      | ELGIN PUMPAGE<br>(m3) | ARVA PUMPAGE<br>(m3) | TOTAL LONDON<br>CONSUMPTION (m3) |
|----------------------------|-----------|-----------------------|----------------------|----------------------------------|
| Rated Capacity             | -         | 95,800 m3 / day       | 318,000 m3 / day     | 413,800 m3 / day                 |
| Friday                     | 1/Mar/13  | 22,821                | 101,213              | 116,418                          |
| Saturday                   | 2/Mar/13  | 22,831                | 95,909               | 120,133                          |
| Sunday                     | 3/Mar/13  | 22,834                | 96,210               | 127,152                          |
| Monday                     | 4/Mar/13  | 22,825                | 108,550              | 120,882                          |
| Tuesday                    | 5/Mar/13  | 22,834                | 86,561               | <b>130,242</b>                   |
| Wednesday                  | 6/Mar/13  | 22,830                | 97,345               | 126,932                          |
| Thursday                   | 7/Mar/13  | 26,227                | 106,840              | 116,964                          |
| Friday                     | 8/Mar/13  | <b>29,080</b>         | 91,707               | 122,180                          |
| Saturday                   | 9/Mar/13  | 22,831                | 92,347               | 116,343                          |
| Sunday                     | 10/Mar/13 | 22,828                | 92,216               | 120,423                          |
| Monday                     | 11/Mar/13 | 22,827                | 96,255               | 117,240                          |
| Tuesday                    | 12/Mar/13 | 22,827                | 91,963               | 117,880                          |
| Wednesday                  | 13/Mar/13 | 22,823                | 92,089               | 119,097                          |
| Thursday                   | 14/Mar/13 | 23,129                | 100,544              | 118,031                          |
| Friday                     | 15/Mar/13 | 22,826                | 97,601               | 115,015                          |
| Saturday                   | 16/Mar/13 | 22,821                | 97,498               | 117,616                          |
| Sunday                     | 17/Mar/13 | 22,831                | 97,788               | 124,727                          |
| Monday                     | 18/Mar/13 | 22,828                | 97,491               | 119,978                          |
| Tuesday                    | 19/Mar/13 | 22,826                | 96,908               | 118,521                          |
| Wednesday                  | 20/Mar/13 | 22,820                | 88,460               | 120,382                          |
| Thursday                   | 21/Mar/13 | 22,836                | 102,530              | 121,004                          |
| Friday                     | 22/Mar/13 | 22,833                | 98,944               | 116,809                          |
| Saturday                   | 23/Mar/13 | 22,831                | 108,317              | 118,507                          |
| Sunday                     | 24/Mar/13 | 22,831                | 96,090               | 125,586                          |
| Monday                     | 25/Mar/13 | 22,833                | 99,442               | 123,581                          |
| Tuesday                    | 26/Mar/13 | 0                     | 96,404               | 123,199                          |
| Wednesday                  | 27/Mar/13 | 22,835                | 96,327               | 112,837                          |
| Thursday                   | 28/Mar/13 | 22,834                | 96,745               | 115,060                          |
| Friday                     | 29/Mar/13 | 22,832                | <b>119,790</b>       | 116,756                          |
| Saturday                   | 30/Mar/13 | 22,830                | 96,835               | 113,746                          |
| Sunday                     | 31/Mar/13 | 22,833                | 93,369               | 114,842                          |
| March 2013 Monthly Max     |           | 29,080                | 119,790              | 130,242                          |
| March 2013 Monthly Average |           | 22,400                | 97,636               | 119,722                          |
| March 2013 Total           |           | 672,006               | 2,929,075            | 3,591,665                        |

| DAY                               | DATE      | ELGIN PUMPAGE<br>(m3) | ARVA PUMPAGE<br>(m3) | TOTAL LONDON<br>CONSUMPTION (m3) |
|-----------------------------------|-----------|-----------------------|----------------------|----------------------------------|
| Rated Capacity                    | -         | 95,800 m3 / day       | 318,000 m3 / day     | 413,800 m3 / day                 |
| Monday                            | 1/Apr/13  | 22,833                | 97,172               | 122,937                          |
| Tuesday                           | 2/Apr/13  | 22,832                | 100,751              | 122,004                          |
| Wednesday                         | 3/Apr/13  | 22,824                | 97,718               | 122,797                          |
| Thursday                          | 4/Apr/13  | 22,832                | 100,624              | 123,231                          |
| Friday                            | 5/Apr/13  | 22,827                | 97,276               | 118,073                          |
| Saturday                          | 6/Apr/13  | 22,827                | 93,417               | 120,979                          |
| Sunday                            | 7/Apr/13  | 22,832                | <b>112,112</b>       | <b>126,376</b>                   |
| Monday                            | 8/Apr/13  | 22,817                | 99,881               | 119,541                          |
| Tuesday                           | 9/Apr/13  | 22,828                | 92,323               | 118,759                          |
| Wednesday                         | 10/Apr/13 | 22,833                | 92,214               | 117,753                          |
| Thursday                          | 11/Apr/13 | 22,831                | 92,424               | 118,637                          |
| Friday                            | 12/Apr/13 | 22,830                | 91,849               | 113,552                          |
| Saturday                          | 13/Apr/13 | 22,829                | 92,467               | 116,198                          |
| Sunday                            | 14/Apr/13 | 22,837                | 105,671              | 123,547                          |
| Monday                            | 15/Apr/13 | 22,831                | 97,582               | 121,991                          |
| Tuesday                           | 16/Apr/13 | 22,838                | 101,666              | 119,995                          |
| Wednesday                         | 17/Apr/13 | 22,827                | 97,689               | 121,406                          |
| Thursday                          | 18/Apr/13 | 22,831                | 93,529               | 119,919                          |
| Friday                            | 19/Apr/13 | 22,830                | 93,383               | 115,620                          |
| Saturday                          | 20/Apr/13 | 22,830                | 89,203               | 117,939                          |
| Sunday                            | 21/Apr/13 | 22,827                | 107,874              | 125,388                          |
| Monday                            | 22/Apr/13 | 22,826                | 104,431              | 122,808                          |
| Tuesday                           | 23/Apr/13 | <b>47,591</b>         | 78,407               | 122,735                          |
| Wednesday                         | 24/Apr/13 | 44,785                | 45,226               | 120,344                          |
| Thursday                          | 25/Apr/13 | 19,719                | 102,132              | 121,267                          |
| Friday                            | 26/Apr/13 | 22,830                | 107,943              | 120,233                          |
| Saturday                          | 27/Apr/13 | 22,826                | 107,831              | 121,818                          |
| Sunday                            | 28/Apr/13 | 22,822                | 107,774              | 123,786                          |
| Monday                            | 29/Apr/13 | 22,824                | 100,863              | 124,873                          |
| Tuesday                           | 30/Apr/13 | 22,932                | 108,371              | 123,578                          |
| <b>April 2013 Monthly Max</b>     |           | 47,591                | 112,112              | 126,376                          |
| <b>April 2013 Monthly Average</b> |           | 24,286                | 96,993               | 120,936                          |
| <b>April 2013 Total</b>           |           | 728,581               | 2,909,803            | 3,628,084                        |

| DAY                      | DATE      | ELGIN PUMPAGE<br>(m3) | ARVA PUMPAGE<br>(m3) | TOTAL LONDON<br>CONSUMPTION (m3) |
|--------------------------|-----------|-----------------------|----------------------|----------------------------------|
| Rated Capacity           | -         | 95,800 m3 / day       | 318,000 m3 / day     | 413,800 m3 / day                 |
| Wednesday                | 1/May/13  | 31,242                | 88,649               | 130,879                          |
| Thursday                 | 2/May/13  | <b>44,976</b>         | 56,487               | 131,064                          |
| Friday                   | 3/May/13  | 19,375                | 104,630              | 122,264                          |
| Saturday                 | 4/May/13  | 22,816                | <b>131,160</b>       | 129,362                          |
| Sunday                   | 5/May/13  | 22,813                | 123,188              | 136,526                          |
| Monday                   | 6/May/13  | 22,820                | 107,457              | 131,464                          |
| Tuesday                  | 7/May/13  | 22,813                | 104,436              | 132,883                          |
| Wednesday                | 8/May/13  | 22,823                | 103,772              | 127,775                          |
| Thursday                 | 9/May/13  | 22,817                | 103,825              | 130,771                          |
| Friday                   | 10/May/13 | 22,819                | 103,087              | 118,225                          |
| Saturday                 | 11/May/13 | 22,817                | 95,277               | 116,018                          |
| Sunday                   | 12/May/13 | 22,815                | 99,831               | 118,197                          |
| Monday                   | 13/May/13 | 22,816                | 89,003               | 122,780                          |
| Tuesday                  | 14/May/13 | 22,825                | 97,292               | 123,067                          |
| Wednesday                | 15/May/13 | 22,827                | 104,882              | 133,596                          |
| Thursday                 | 16/May/13 | 22,821                | 124,356              | 144,240                          |
| Friday                   | 17/May/13 | 22,802                | 109,777              | 119,277                          |
| Saturday                 | 18/May/13 | 22,818                | 97,403               | 124,967                          |
| Sunday                   | 19/May/13 | 22,822                | 101,404              | 133,959                          |
| Monday                   | 20/May/13 | 22,889                | 116,168              | <b>151,356</b>                   |
| Tuesday                  | 21/May/13 | 22,819                | 130,911              | 145,245                          |
| Wednesday                | 22/May/13 | 22,818                | 123,893              | 136,705                          |
| Thursday                 | 23/May/13 | 11,721                | 111,890              | 128,036                          |
| Friday                   | 24/May/13 | 22,825                | 114,903              | 128,279                          |
| Saturday                 | 25/May/13 | 22,821                | 111,248              | 130,510                          |
| Sunday                   | 26/May/13 | 22,815                | 111,946              | 143,934                          |
| Monday                   | 27/May/13 | 22,766                | 120,130              | 145,551                          |
| Tuesday                  | 28/May/13 | 22,760                | 108,291              | 129,871                          |
| Wednesday                | 29/May/13 | 22,759                | 111,925              | 135,864                          |
| Thursday                 | 30/May/13 | 22,760                | 116,058              | 136,753                          |
| Friday                   | 31/May/13 | 22,756                | 108,553              | 133,669                          |
| May 2013 Monthly Max     |           | 44,976                | 131,160              | 151,356                          |
| May 2013 Monthly Average |           | 23,065                | 108,106              | 131,407                          |
| May 2013 Total           |           | 691,944               | 3,243,183            | 3,942,208                        |

| DAY                       | DATE      | ELGIN PUMPAGE<br>(m3) | ARVA PUMPAGE<br>(m3) | TOTAL LONDON<br>CONSUMPTION (m3) |
|---------------------------|-----------|-----------------------|----------------------|----------------------------------|
| Rated Capacity            | -         | 95,800 m3 / day       | 318,000 m3 / day     | 413,800 m3 / day                 |
| Saturday                  | 1/Jun/13  | 22,746                | 115,991              | 126,317                          |
| Sunday                    | 2/Jun/13  | 22,755                | 109,161              | 128,950                          |
| Monday                    | 3/Jun/13  | 22,766                | 100,413              | 128,221                          |
| Tuesday                   | 4/Jun/13  | 22,772                | 103,412              | 134,168                          |
| Wednesday                 | 5/Jun/13  | 22,825                | 103,871              | 135,228                          |
| Thursday                  | 6/Jun/13  | 22,823                | 111,142              | 124,023                          |
| Friday                    | 7/Jun/13  | 22,831                | 99,424               | 124,550                          |
| Saturday                  | 8/Jun/13  | 22,829                | 107,041              | 124,856                          |
| Sunday                    | 9/Jun/13  | 22,825                | 110,884              | 142,263                          |
| Monday                    | 10/Jun/13 | 22,828                | 108,843              | 124,297                          |
| Tuesday                   | 11/Jun/13 | 20,978                | 85,348               | 121,621                          |
| Wednesday                 | 12/Jun/13 | <b>23,054</b>         | 108,856              | 131,324                          |
| Thursday                  | 13/Jun/13 | 22,782                | 97,707               | 129,249                          |
| Friday                    | 14/Jun/13 | 22,760                | 112,531              | 129,748                          |
| Saturday                  | 15/Jun/13 | 22,797                | <b>129,538</b>       | 126,705                          |
| Sunday                    | 16/Jun/13 | 22,841                | 97,833               | 126,309                          |
| Monday                    | 17/Jun/13 | 22,813                | 103,953              | 139,730                          |
| Tuesday                   | 18/Jun/13 | 22,835                | 116,137              | 134,861                          |
| Wednesday                 | 19/Jun/13 | 22,821                | 124,055              | 137,430                          |
| Thursday                  | 20/Jun/13 | 22,850                | 115,899              | 145,245                          |
| Friday                    | 21/Jun/13 | 22,814                | 123,646              | 141,446                          |
| Saturday                  | 22/Jun/13 | 22,822                | 107,848              | 134,209                          |
| Sunday                    | 23/Jun/13 | 22,799                | 123,778              | 148,052                          |
| Monday                    | 24/Jun/13 | 22,817                | 127,925              | <b>158,096</b>                   |
| Tuesday                   | 25/Jun/13 | 22,797                | 126,997              | 142,145                          |
| Wednesday                 | 26/Jun/13 | 22,810                | 123,181              | 151,000                          |
| Thursday                  | 27/Jun/13 | 22,822                | 111,341              | 134,456                          |
| Friday                    | 28/Jun/13 | 22,834                | 114,967              | 122,146                          |
| Saturday                  | 29/Jun/13 | 22,827                | 101,654              | 122,998                          |
| Sunday                    | 30/Jun/13 | 22,827                | 96,915               | 120,631                          |
| June 2013 Monthly Max     |           | 23,054                | 129,538              | 158,096                          |
| June 2013 Monthly Average |           | 22,757                | 110,676              | 133,009                          |
| June 2013 Total           |           | 682,700               | 3,320,291            | 3,990,274                        |



| DAY                       | DATE      | ELGIN PUMPAGE<br>(m3) | ARVA PUMPAGE<br>(m3) | TOTAL LONDON<br>CONSUMPTION (m3) |
|---------------------------|-----------|-----------------------|----------------------|----------------------------------|
| Rated Capacity            | -         | 95,800 m3 / day       | 318,000 m3 / day     | 413,800 m3 / day                 |
| Monday                    | 1/Jul/13  | 22,824                | 100,841              | 122,776                          |
| Tuesday                   | 2/Jul/13  | 22,831                | 96,474               | 129,371                          |
| Wednesday                 | 3/Jul/13  | 22,836                | 103,566              | 140,515                          |
| Thursday                  | 4/Jul/13  | 27,274                | 103,628              | 134,988                          |
| Friday                    | 5/Jul/13  | <b>27,280</b>         | 107,197              | 125,990                          |
| Saturday                  | 6/Jul/13  | 27,273                | 107,101              | 128,202                          |
| Sunday                    | 7/Jul/13  | 27,269                | 106,882              | 125,884                          |
| Monday                    | 8/Jul/13  | 27,277                | 105,067              | 130,267                          |
| Tuesday                   | 9/Jul/13  | 27,271                | 101,413              | 130,464                          |
| Wednesday                 | 10/Jul/13 | 27,268                | 100,918              | 129,966                          |
| Thursday                  | 11/Jul/13 | 27,265                | 104,986              | 131,064                          |
| Friday                    | 12/Jul/13 | 22,436                | 104,331              | 133,558                          |
| Saturday                  | 13/Jul/13 | 22,438                | 112,685              | 131,288                          |
| Sunday                    | 14/Jul/13 | 22,439                | 118,613              | 145,182                          |
| Monday                    | 15/Jul/13 | 22,426                | 120,131              | 151,375                          |
| Tuesday                   | 16/Jul/13 | 21,497                | 140,081              | 155,710                          |
| Wednesday                 | 17/Jul/13 | 22,430                | 138,906              | 161,923                          |
| Thursday                  | 18/Jul/13 | 22,427                | <b>146,279</b>       | <b>165,464</b>                   |
| Friday                    | 19/Jul/13 | 22,443                | 134,610              | 149,376                          |
| Saturday                  | 20/Jul/13 | 22,430                | 119,463              | 140,409                          |
| Sunday                    | 21/Jul/13 | 22,421                | 123,340              | 149,908                          |
| Monday                    | 22/Jul/13 | 22,431                | 115,501              | 147,655                          |
| Tuesday                   | 23/Jul/13 | 22,437                | 119,801              | 136,644                          |
| Wednesday                 | 24/Jul/13 | 22,422                | 119,305              | 145,560                          |
| Thursday                  | 25/Jul/13 | 22,420                | 132,394              | 153,046                          |
| Friday                    | 26/Jul/13 | 22,440                | 120,175              | 148,197                          |
| Saturday                  | 27/Jul/13 | 22,441                | 120,132              | 122,795                          |
| Sunday                    | 28/Jul/13 | 22,433                | 103,342              | 124,588                          |
| Monday                    | 29/Jul/13 | 22,434                | 99,797               | 129,943                          |
| Tuesday                   | 30/Jul/13 | 22,441                | 111,107              | 138,859                          |
| Wednesday                 | 31/Jul/13 | 22,444                | 115,283              | 130,043                          |
| July 2013 Monthly Max     |           | 27,280                | 146,279              | 165,464                          |
| July 2013 Monthly Average |           | 23,690                | 114,624              | 138,420                          |
| July 2013 Total           |           | 734,398               | 3,553,349            | 4,291,010                        |

| DAY                         | DATE      | ELGIN PUMPAGE<br>(m3) | ARVA PUMPAGE<br>(m3) | TOTAL LONDON<br>CONSUMPTION (m3) |
|-----------------------------|-----------|-----------------------|----------------------|----------------------------------|
| Rated Capacity              | -         | 95,800 m3 / day       | 318,000 m3 / day     | 413,800 m3 / day                 |
| Thursday                    | 1/Aug/13  | 22,420                | 109,010              | 130,837                          |
| Friday                      | 2/Aug/13  | 22,443                | 99,270               | 122,306                          |
| Saturday                    | 3/Aug/13  | 22,444                | 103,682              | 120,490                          |
| Sunday                      | 4/Aug/13  | 22,430                | 97,617               | 118,261                          |
| Monday                      | 5/Aug/13  | 22,437                | 101,827              | 128,720                          |
| Tuesday                     | 6/Aug/13  | 22,446                | 96,523               | 132,274                          |
| Wednesday                   | 7/Aug/13  | 22,454                | 104,516              | 134,311                          |
| Thursday                    | 8/Aug/13  | <b>22,458</b>         | 109,187              | 135,161                          |
| Friday                      | 9/Aug/13  | 22,456                | 116,564              | 134,330                          |
| Saturday                    | 10/Aug/13 | 22,437                | 125,431              | 131,659                          |
| Sunday                      | 11/Aug/13 | 22,453                | 113,481              | 136,527                          |
| Monday                      | 12/Aug/13 | 22,454                | 111,479              | 136,893                          |
| Tuesday                     | 13/Aug/13 | 22,455                | 111,626              | 135,850                          |
| Wednesday                   | 14/Aug/13 | 22,444                | 111,101              | 140,912                          |
| Thursday                    | 15/Aug/13 | 22,449                | 119,417              | 145,680                          |
| Friday                      | 16/Aug/13 | 22,436                | 127,036              | 146,245                          |
| Saturday                    | 17/Aug/13 | 22,440                | <b>135,229</b>       | 144,096                          |
| Sunday                      | 18/Aug/13 | 22,440                | 131,592              | 151,066                          |
| Monday                      | 19/Aug/13 | 22,437                | 131,308              | 154,338                          |
| Tuesday                     | 20/Aug/13 | 22,434                | 135,131              | 154,896                          |
| Wednesday                   | 21/Aug/13 | 22,444                | 127,781              | <b>158,822</b>                   |
| Thursday                    | 22/Aug/13 | 22,436                | 123,788              | 146,814                          |
| Friday                      | 23/Aug/13 | 22,435                | 127,732              | 150,756                          |
| Saturday                    | 24/Aug/13 | 22,440                | 127,620              | 146,513                          |
| Sunday                      | 25/Aug/13 | 22,436                | 131,612              | 154,344                          |
| Monday                      | 26/Aug/13 | 22,453                | 119,681              | 149,810                          |
| Tuesday                     | 27/Aug/13 | 22,433                | 123,349              | 147,257                          |
| Wednesday                   | 28/Aug/13 | 22,447                | 111,249              | 138,395                          |
| Thursday                    | 29/Aug/13 | 22,441                | 122,851              | 142,358                          |
| Friday                      | 30/Aug/13 | 22,435                | 122,584              | 135,585                          |
| Saturday                    | 31/Aug/13 | 22,435                | 119,110              | 128,772                          |
| August 2013 Monthly Max     |           | 22,458                | 135,229              | 158,822                          |
| August 2013 Monthly Average |           | 22,442                | 117,690              | 139,815                          |
| August 2013 Total           |           | 695,702               | 3,648,384            | 4,334,278                        |

| DAY                                   | DATE      | ELGIN PUMPAGE<br>(m3) | ARVA PUMPAGE<br>(m3) | TOTAL LONDON<br>CONSUMPTION (m3) |
|---------------------------------------|-----------|-----------------------|----------------------|----------------------------------|
| Rated Capacity                        | -         | 95,800 m3 / day       | 318,000 m3 / day     | 413,800 m3 / day                 |
| Sunday                                | 1/Sep/13  | 22,440                | 110,496              | 127,865                          |
| Monday                                | 2/Sep/13  | 22,433                | 104,760              | 140,886                          |
| Tuesday                               | 3/Sep/13  | 22,435                | 101,007              | 128,773                          |
| Wednesday                             | 4/Sep/13  | 22,433                | 109,135              | 142,756                          |
| Thursday                              | 5/Sep/13  | 22,420                | 121,944              | 139,665                          |
| Friday                                | 6/Sep/13  | 22,426                | 121,102              | 135,859                          |
| Saturday                              | 7/Sep/13  | 22,430                | 105,087              | 126,035                          |
| Sunday                                | 8/Sep/13  | 22,433                | 113,398              | 144,097                          |
| Monday                                | 9/Sep/13  | 22,420                | 123,316              | 143,376                          |
| Tuesday                               | 10/Sep/13 | 22,430                | <b>132,094</b>       | <b>155,999</b>                   |
| Wednesday                             | 11/Sep/13 | 22,437                | 121,052              | 141,424                          |
| Thursday                              | 12/Sep/13 | 22,444                | 118,993              | 134,638                          |
| Friday                                | 13/Sep/13 | 22,441                | 107,357              | 128,612                          |
| Saturday                              | 14/Sep/13 | 22,436                | 107,573              | 127,339                          |
| Sunday                                | 15/Sep/13 | 22,439                | 105,605              | 132,493                          |
| Monday                                | 16/Sep/13 | 22,438                | 104,390              | 131,264                          |
| Tuesday                               | 17/Sep/13 | <b>22,445</b>         | 112,271              | 138,256                          |
| Wednesday                             | 18/Sep/13 | 22,439                | 115,863              | 138,302                          |
| Thursday                              | 19/Sep/13 | 22,425                | 116,199              | 138,624                          |
| Friday                                | 20/Sep/13 | 22,434                | 104,047              | 127,366                          |
| Saturday                              | 21/Sep/13 | 22,442                | 104,120              | 120,368                          |
| Sunday                                | 22/Sep/13 | 22,438                | 108,768              | 128,243                          |
| Monday                                | 23/Sep/13 | 22,438                | 103,238              | 126,566                          |
| Tuesday                               | 24/Sep/13 | 22,433                | 103,326              | 128,127                          |
| Wednesday                             | 25/Sep/13 | 22,440                | 107,106              | 128,956                          |
| Thursday                              | 26/Sep/13 | 22,441                | 107,175              | 130,206                          |
| Friday                                | 27/Sep/13 | 22,437                | 103,083              | 127,289                          |
| Saturday                              | 28/Sep/13 | 22,437                | 106,560              | 125,156                          |
| Sunday                                | 29/Sep/13 | 22,437                | 103,032              | 129,605                          |
| Monday                                | 30/Sep/13 | 22,442                | 101,150              | 129,492                          |
| <b>September 2013 Monthly Max</b>     |           | 22,445                | 132,094              | 155,999                          |
| <b>September 2013 Monthly Average</b> |           | 22,435                | 110,108              | 133,255                          |
| <b>September 2013 Total</b>           |           | 673,063               | 3,303,247            | 3,997,637                        |

| DAY                                 | DATE      | ELGIN PUMPAGE<br>(m3) | ARVA PUMPAGE<br>(m3) | TOTAL LONDON<br>CONSUMPTION (m3) |
|-------------------------------------|-----------|-----------------------|----------------------|----------------------------------|
| Rated Capacity                      | -         | 95,800 m3 / day       | 318,000 m3 / day     | 413,800 m3 / day                 |
| Tuesday                             | 1/Oct/13  | 22,447                | 107,885              | 129,742                          |
| Wednesday                           | 2/Oct/13  | 22,441                | <b>113,019</b>       | <b>130,150</b>                   |
| Thursday                            | 3/Oct/13  | 22,439                | 104,883              | 128,797                          |
| Friday                              | 4/Oct/13  | 22,440                | 104,504              | 122,520                          |
| Saturday                            | 5/Oct/13  | 22,440                | 97,040               | 120,955                          |
| Sunday                              | 6/Oct/13  | 22,443                | 105,308              | 125,979                          |
| Monday                              | 7/Oct/13  | 22,439                | 108,246              | 125,049                          |
| Tuesday                             | 8/Oct/13  | 22,436                | 104,162              | 125,412                          |
| Wednesday                           | 9/Oct/13  | 22,438                | 100,089              | 126,679                          |
| Thursday                            | 10/Oct/13 | 22,439                | 104,364              | 124,431                          |
| Friday                              | 11/Oct/13 | 22,433                | 92,791               | 118,190                          |
| Saturday                            | 12/Oct/13 | 22,432                | 92,763               | 115,788                          |
| Sunday                              | 13/Oct/13 | 22,441                | 88,358               | 109,612                          |
| Monday                              | 14/Oct/13 | 22,437                | 97,078               | 124,841                          |
| Tuesday                             | 15/Oct/13 | 22,439                | 101,058              | 124,972                          |
| Wednesday                           | 16/Oct/13 | 22,439                | 104,320              | 123,810                          |
| Thursday                            | 17/Oct/13 | 22,444                | 100,874              | 123,792                          |
| Friday                              | 18/Oct/13 | 22,443                | 92,950               | 118,458                          |
| Saturday                            | 19/Oct/13 | 29,446                | 89,380               | 115,877                          |
| Sunday                              | 20/Oct/13 | 29,448                | 97,521               | 125,197                          |
| Monday                              | 21/Oct/13 | 29,446                | 95,918               | 120,915                          |
| Tuesday                             | 22/Oct/13 | <b>31,908</b>         | 88,847               | 127,270                          |
| Wednesday                           | 23/Oct/13 | 1,484                 | 108,052              | 118,963                          |
| Thursday                            | 24/Oct/13 | 22,296                | 106,926              | 120,975                          |
| Friday                              | 25/Oct/13 | 22,293                | 103,692              | 115,917                          |
| Saturday                            | 26/Oct/13 | 22,289                | 84,037               | 113,740                          |
| Sunday                              | 27/Oct/13 | 22,296                | 96,108               | 121,058                          |
| Monday                              | 28/Oct/13 | 22,292                | 92,683               | 119,695                          |
| Tuesday                             | 29/Oct/13 | 22,292                | 96,875               | 120,640                          |
| Wednesday                           | 30/Oct/13 | 22,287                | 101,233              | 122,047                          |
| Thursday                            | 31/Oct/13 | 22,303                | 105,092              | 116,759                          |
| <b>October 2013 Monthly Max</b>     |           | 31,908                | 113,019              | 130,150                          |
| <b>October 2013 Monthly Average</b> |           | 22,709                | 99,550               | 121,878                          |
| <b>October 2013 Total</b>           |           | 703,990               | 3,086,056            | 3,778,230                        |



| DAY                                  | DATE      | ELGIN PUMPAGE<br>(m3) | ARVA PUMPAGE<br>(m3) | TOTAL LONDON<br>CONSUMPTION (m3) |
|--------------------------------------|-----------|-----------------------|----------------------|----------------------------------|
| Rated Capacity                       | -         | 95,800 m3 / day       | 318,000 m3 / day     | 413,800 m3 / day                 |
| Friday                               | 1/Nov/13  | 22,293                | 92,753               | 115,640                          |
| Saturday                             | 2/Nov/13  | 22,294                | 99,231               | 117,372                          |
| Sunday                               | 3/Nov/13  | 22,299                | 103,311              | 124,424                          |
| Monday                               | 4/Nov/13  | 22,298                | 100,828              | 125,795                          |
| Tuesday                              | 5/Nov/13  | 22,299                | 100,689              | 120,615                          |
| Wednesday                            | 6/Nov/13  | 22,303                | 93,078               | 119,830                          |
| Thursday                             | 7/Nov/13  | 22,300                | 93,174               | 121,390                          |
| Friday                               | 8/Nov/13  | 22,303                | 96,691               | 120,174                          |
| Saturday                             | 9/Nov/13  | 22,297                | 96,085               | 114,548                          |
| Sunday                               | 10/Nov/13 | 22,301                | 96,778               | 116,720                          |
| Monday                               | 11/Nov/13 | 22,297                | 96,646               | 119,126                          |
| Tuesday                              | 12/Nov/13 | 22,300                | 97,243               | 118,449                          |
| Wednesday                            | 13/Nov/13 | 22,307                | 97,400               | 120,072                          |
| Thursday                             | 14/Nov/13 | 22,304                | 97,392               | 122,646                          |
| Friday                               | 15/Nov/13 | 25,562                | 93,451               | 115,474                          |
| Saturday                             | 16/Nov/13 | 25,560                | 73,295               | 112,685                          |
| Sunday                               | 17/Nov/13 | 25,580                | 82,833               | 116,305                          |
| Monday                               | 18/Nov/13 | <b>37,158</b>         | 107,007              | <b>133,926</b>                   |
| Tuesday                              | 19/Nov/13 | 25,571                | 104,363              | 124,645                          |
| Wednesday                            | 20/Nov/13 | 25,555                | 93,299               | 122,969                          |
| Thursday                             | 21/Nov/13 | 25,558                | 106,099              | 122,232                          |
| Friday                               | 22/Nov/13 | 25,557                | 88,441               | 120,193                          |
| Saturday                             | 23/Nov/13 | 25,566                | 88,028               | 117,411                          |
| Sunday                               | 24/Nov/13 | 25,559                | 101,754              | 132,301                          |
| Monday                               | 25/Nov/13 | 25,563                | <b>108,935</b>       | 127,457                          |
| Tuesday                              | 26/Nov/13 | 25,551                | 97,954               | 119,672                          |
| Wednesday                            | 27/Nov/13 | 25,566                | 96,356               | 127,334                          |
| Thursday                             | 28/Nov/13 | 25,548                | 101,486              | 128,386                          |
| Friday                               | 29/Nov/13 | 25,546                | 103,594              | 117,866                          |
| Saturday                             | 30/Nov/13 | 25,558                | 91,119               | 119,834                          |
| <b>November 2013 Monthly Max</b>     |           | 37,158                | 108,935              | 133,926                          |
| <b>November 2013 Monthly Average</b> |           | 24,425                | 96,644               | 121,183                          |
| <b>November 2013 Total</b>           |           | 732,753               | 2,899,313            | 3,635,491                        |

| DAY                           | DATE      | ELGIN PUMPAGE<br>(m3) | ARVA PUMPAGE<br>(m3) | TOTAL LONDON<br>CONSUMPTION (m3) |
|-------------------------------|-----------|-----------------------|----------------------|----------------------------------|
| Rated Capacity                | -         | 95,800 m3 / day       | 318,000 m3 / day     | 413,800 m3 / day                 |
| Sunday                        | 1/Dec/13  | 25,549                | 101,770              | 125,966                          |
| Monday                        | 2/Dec/13  | 25,545                | 102,215              | 123,025                          |
| Tuesday                       | 3/Dec/13  | 25,230                | 91,311               | 123,757                          |
| Wednesday                     | 4/Dec/13  | 18,663                | 105,274              | 123,937                          |
| Thursday                      | 5/Dec/13  | 18,652                | 102,910              | 126,973                          |
| Friday                        | 6/Dec/13  | 18,639                | 103,496              | 120,782                          |
| Saturday                      | 7/Dec/13  | 18,646                | 103,333              | 122,656                          |
| Sunday                        | 8/Dec/13  | 18,646                | <b>114,833</b>       | 124,234                          |
| Monday                        | 9/Dec/13  | 18,642                | 100,999              | 123,700                          |
| Tuesday                       | 10/Dec/13 | 18,643                | 104,921              | 127,848                          |
| Wednesday                     | 11/Dec/13 | 18,648                | 108,210              | 127,760                          |
| Thursday                      | 12/Dec/13 | 18,642                | 112,376              | <b>128,086</b>                   |
| Friday                        | 13/Dec/13 | 18,642                | 100,767              | 117,606                          |
| Saturday                      | 14/Dec/13 | 18,643                | 96,940               | 118,739                          |
| Sunday                        | 15/Dec/13 | 18,649                | 108,171              | 125,918                          |
| Monday                        | 16/Dec/13 | 18,644                | 104,806              | 127,284                          |
| Tuesday                       | 17/Dec/13 | 18,639                | 104,706              | 124,472                          |
| Wednesday                     | 18/Dec/13 | 18,644                | 100,875              | 124,254                          |
| Thursday                      | 19/Dec/13 | <b>26,041</b>         | 100,813              | 120,992                          |
| Friday                        | 20/Dec/13 | 25,156                | 97,402               | 117,146                          |
| Saturday                      | 21/Dec/13 | 17,647                | 97,232               | 116,908                          |
| Sunday                        | 22/Dec/13 | 17,655                | 100,675              | 117,203                          |
| Monday                        | 23/Dec/13 | 17,644                | 96,516               | 117,768                          |
| Tuesday                       | 24/Dec/13 | 17,656                | 92,315               | 117,637                          |
| Wednesday                     | 25/Dec/13 | 17,653                | 99,298               | 101,618                          |
| Thursday                      | 26/Dec/13 | 17,650                | 91,750               | 104,665                          |
| Friday                        | 27/Dec/13 | 17,644                | 84,171               | 109,031                          |
| Saturday                      | 28/Dec/13 | 17,656                | 92,185               | 111,419                          |
| Sunday                        | 29/Dec/13 | 17,653                | 99,981               | 113,350                          |
| Monday                        | 30/Dec/13 | 17,646                | 93,780               | 118,867                          |
| Tuesday                       | 31/Dec/13 | 17,655                | 96,967               | 115,749                          |
| December 2013 Monthly Max     |           | 26,041                | 114,833              | 128,086                          |
| December 2013 Monthly Average |           | 19,399                | 100,355              | 119,979                          |
| December 2013 Total           |           | 601,362               | 3,110,998            | 3,719,350                        |